Requirements for Transporting Volatile Gases

Approved Specifications for Refrigerant Drums, Permissible Internal Pressures Outlined

By Franklin R. Fetherston*
Secretary-treasurer, Compressed Gas Manufacturers' Association, Inc.

FOR the purpose of limiting the subject, the only commodities which we shall consider will be those having vapor pressures exceeding 25 lbs. per sq. in. gauge at normal atmospheric temperature (70° F.). This includes a class of material that might be termed volatile liquids, however, the regulations of the Interstate Commerce Commission applying to the transportation of dangerous articles in interstate commerce, define such commodities as compressed gases, which may not be accepted for transportation by any common carrier engaged in interstate commerce unless offered in containers complying with the approved specifications of that commission.

The storage and handling of volatile liquids of lesser vapor pressures present an entirely different problem and will not be considered here.

The compressed gases that are used most frequently in industry today may be grouped into six classes, based upon similarity of characteristics that permit their storage and handling in containers of like design. These classes will be considered in a general way later, but let us first review the general characteristics of gases and gas containers that make the usual problems of storage and handling very nearly the same for all of these commodities.

Expand with Increased Temperature

Whether in the liquid or gaseous phase, all gases expand with increase of temperature, resulting in an increase of pressure within the container in which the gas is stored; and, conversely, decrease of temperature decreases the pressure exerted upon the wall of a gas-containing cylinder.

A loss of valuable material was prevented, not long ago, by an unusual application of this principle in the handling of a large container of liquid chlorine gas. The valve on the container became stuck, and damage to the equipment was feared if an attempt were made to force it.

However, the container was packed in solid carbon dioxide, which has a temperature of about -112° F., cooling the content of the container and reducing its vapor pressure below atmospheric pressure.

This permitted the safe removal of the damaged valve and the substitution of a new one, without loss of material or inconvenience to anyone from escaping gas.

Temperature Ranges Determined

It is evident that in order to design pressure vessels correctly for these commodities, reasonable limits of temperature range had to be determined. This the industries have done, accepting, after much experiment and experience, 130° F. as the maximum temperature the content of an uninsulated portable container will reach while in transportation, and 105° F. as the maximum temperature that may be attained in insulated containers, under similar conditions.

Normal atmospheric temperature usually is considered to be 70° F., and that temperature is used as the basis for establishing working or service pressure for design calculations.

Having established the maximum temperature to be considered, it is evident that cylinders charged with a liquefied gas should never be liquid full at this upper limit of the temperature range (130° F.), for it is most essential that hydrostatic pressure should never exist in a cylinder of liquefied gas.

Under hydrostatic conditions a tremendous increase in pressure due to thermal expansion of the liquid may be caused by a relatively slight increase in temperature, resulting in possible damage to the cylinder, or release of the gas through functioning of the safety devices.

Gases should be charged into containers at densities not greater than the maximum accepted by the industry, for these densities are calculated to prevent hydrostatic pressures under the conditions mentioned.

In the following table are given the maximum permissible filling densities of the more important liquefied gases, expressed as the ratio of the weight of gas allowed per pound of cylinder water capacity.

125%—for chlorine and sulphur dioxide.
75%—for methyl chloride.
68%—for carbon dioxide, nitrous oxide, and hydrogen sulfide.
54%—for anhydrous ammonia, and monomethylamine.
44%—for prophylene.
33%—for ethylene.
26 to 57% for liquefied petroleum gases depending upon the specific gravity of the mixture within the range of specific gravities 0.271 to 0.634.

Similarly, in order to insure against excessive pressures at the upper temperature limit in cylinders containing gases that are not liquefied or dissolved, a maximum ratio of pressure at 70° F. to allowable pressure at 130° F. had to be established.

130° Pressure Limit

Experience proved that this relation should not exceed 1 to 1¼, and consequently all cylinders charged with nonliquefied gases that are not in solution, to be properly protected against excessive pressures due to temperature increase, should be so charged that the pressure at 130° F. will not be greater than 1¼ times the pressure at 70° F.

This is an established regulation and is required of all cylinders of these gases to be acceptable for transportation under the rules of the Interstate Commerce Commission.

In order to prove each cylinder at the time of manufacture it is required that they be subjected to hydrostatic pressure in excess of the design or service pressure by a definite ratio, which varies with the type of cylinder from 5/3 to 1, 7/3 to 1. After a container goes into service, periodic retests of a similar nature are generally required so that its integrity as a storage vessel is regularly determined.

Governed by Commerce Commission

Compressed gases shipped in interstate commerce, or carried by transportation lines engaged in interstate commerce, are governed by the strict regulations of the Interstate Commerce Commission and must be shipped only in containers complying with the specifications approved by that commission.

The compressed gas industry works very closely with the Interstate Commerce Commission through the Bureau of Explosives and is largely responsible for the development of these specifications.

Users of compressed gases should insist upon gases being delivered to them only in containers complying with specifications of the Interstate Commerce Commission.

The integrity of compressed gas cylinders constructed in accordance with approved specifications is indicated by the accident record, published by the Bureau of Explosives in their last annual report.

During 1931 only $65 damage was incurred for which compressed gases were responsible, on all the railroads in the United States and Canada.

This is an amazingly small figure when it is considered that the gas industries own some five million or more of these containers which are constantly kept in circulation.

The gas manufacturer seldom, if ever, experiences any difficulty in the handling and use of cylinders or their contents, principally because they fully appreciate that these containers must be treated with a certain amount of respect and must be handled thoughtfully.

With one exception, all compressed gas containers are equipped with safety devices designed to prevent the building up of excessive pressures within the container. The type of device used varies somewhat according to the nature of the gas and the type of cylinder, but the principle involved is the same in all cases.

The safety device is intended to eliminate the bursting hazard, a hazard that is present in any type of pressure vessel in proportion to the amount of potential energy stored in the container.

Cylinders containing compressed gases are carefully inspected at the charging plant before being shipped. When they are delivered to the plant where the gas is to be consumed they should not be dropped or thrown about or given other rough usage; nor should they be used for rollers.

Every cylinder should be plainly marked by the gas manufacturer with the name of its gas content and care should be exercised to see that this marking is kept legible.

Color Markings Not Sufficient

Color schemes for identifying gas cylinder content are not recommended. The Compressed Gas Manufacturers' Association has maintained that the designation of the content of any compressed gas cylinder should be by the imprinting of the name of the gas contained upon the cylinder in letters at least one inch high.

Cylinder valves should be kept tightly closed except when in service, and every user of compressed gas should be very particular to see that the valves are tightly closed on empty cylinders before returning them to the gas manufacturer.

There are a number of other essential precautions that anyone handling compressed gases should observe, but rather than repeat too many of these fundamental facts I refer you to Safe Practices Pamphlet No. 95 of the National Safety Council, and to the Compressed Gas Manufacturers' Association pamphlet on the same subject.

Let us return to a consideration of the six groups of gases previously mentioned and the types of containers required for their storage and handling.

Acetylene Dissolved in Solvent

The first is reserved for Acetylene because of all the commercial compressed gases it alone has to be dissolved in a suitable solvent in order to make its storage for transportation in economical quantities, practical and safe.

The shipping container for this gas is usually made with a seamless drawn shell or body with one or both ends welded or brazed under certain restrictions. The cylinder is completely filled with a porous mass which is saturated with a suitable solvent, and the gas is dissolved in this solvent under pressure, the maximum permitted filling being 250 lbs. per sq. in. at 70° F.

The fusible plug type of safety device used in acetylene cylinders is designed to melt at temperatures within the range 208° to 220° F.

The second group of gases include such liquefied gases as anhydrous ammonia, sulphur dioxide, methyl chloride, and monomethylamine, because these gases have relatively similar characteristics which require their storage in similar type containers.

Service Pressure for Methyl

The service pressures for which the containers for these gases are designed are slightly different, however, being 150 lbs. per sq. in. at 70° F. for methyl chloride; 300 lbs. for monomethylamine and sulphur dioxide; and 480 lbs. for anhydrous ammonia.

Two general types of containers are commonly in use: The seamless drawn cylinder and a type of cylinder fabricated from forge lap welded pipe of Bessemer steel. This latter type cylinder is used most frequently in anhydrous ammonia service, although it is a suitable container for the other gases in this class.

Cylinders for these gases, with the exception of anhydrous ammonia, are fitted with safety devices of the fusible plug type designed to melt at temperatures between 157° F. and 170° F. The frangible disc type of device is sometimes used on methyl chloride cylinders designed for test pressures of at least 150 lbs. per sq. in., and on small test pressures of at least 450 lbs. per sq. in., and on small sulphur dioxide cylinders of 35-lb. gas capacity, or less.

Both methyl chloride and sulphur dioxide find use in a field where it is necessary for the gas to be transferred from the shipping container into small cylinders.

This procedure should be approached cautiously and if properly done involves no great hazard. The amount of gas so transferred should be accurately weighed to insure proper filling density in the small container.

The gas manufacturers furnish complete instructions for this procedure and the gas consumer should take advantage of all services of this kind that are given by the gas producers, and follow their instructions explicitly.

It is often considered necessary to warm cylinders containing these liquefied gases in order to accelerate the rate of discharge. If this is done, extreme care should be taken to see that the temperature of the warming bath does not exceed 100° F.

Higher temperatures may weaken or possibly melt the fusible plug safety device. Accordingly torches, live steam or direct heat of any kind should not be used for this purpose.

Cylinders should be stored in a cool place and except for the long type ammonia container, should preferably be placed on end so that the liquid in the cylinder is kept away from the valve. The withdrawal of ammonia from a plant into empty cylinders should be done in accordance with instructions that are furnished by the gas manufacturer.

It is apparent that such cylinders should not be over-charged for in that event a serious hazard would be created which might result in damage to the container and grave inconvenience to the employees of the plant or to the public.

1,800-lb. Pressure for Carbon Dioxide

The fourth group of gases embraces the liquefied gases such as carbon-dioxide, nitrous oxide and ethylene which are stored as liquids under relatively high pressures. These gases are stored and handled in seamless cylinders designed for service pressures of 1,800 lbs. at 70° F. or greater.

Carbon dioxide is an inert, nonflammable gas and requires no special attention other than storage in a cool, well-ventilated space. Ethylene is a flammable gas and should be stored and handled as such.

The carbon dioxide industry has developed many and varied uses for solidified carbon dioxide. This product is handled as a solid material ordinarily, requiring only reasonable care to protect users from its extremely low temperature.

Use of CO_2 Liquefiers

A more recent application of this material, however, requires its evaporation in a suitable pressure vessel, where, under the pressure so developed, the gas is liquefied and used directly from the storage vessel, in the same manner in which the gas is utilized from the better known liquid carbon dioxide cylinder.

These storage vessels are known in the trade as "liquefiers." They are designed for permanent installation in the plant of the gas consumer and closely approximate the usual carbon dioxide cylinder in design, except that the liquefier is equipped with a removable head to permit filling of the cylindrical body with the solid product.

These containers should be filled and handled only by trained, competent men. The weight of solid carbon dioxide charged into a liquefier should not exceed the amount for which it was designed, and with ordinary care in filling this weight cannot be easily exceeded.

The fifth group of gases includes chlorine and hydrogen sulfide, both of which are stored as liquids and shipped in containers at relatively low pressure compared to the gases in group four. The pressure for which the containers for these gases are designed is 480 lbs. per sq. in. at 70° F., or greater.

Group six covers the liquefied petroleum and liquefied hydrocarbon gases, a class of material that may be blended to produce compounds with vapor pressures varying from approximately 23 lbs. per sq. in. at 70° F., to approximately 145 lbs. per sq. in. at 70° F. Higher vapor pressure products are possible but the industry, to the best of my knowledge, has not made commercial use of any of these products with vapor pressures greater than 145 lbs. at 70° F.

Only gases in portable cylinders have been discussed so far. There are other containers designed for the handling and storage of gases in large quantities. Four types of tank cars are authorized by the Interstate Commerce Commission for the transportation of gases, but the maximum quantity that may be stored for transportation in a single tank mounted on one car structure is limited to 60,000 lbs. of gas.

Tank Car Transportation

First is the I.C.C. 104-A car which is a lagged riveted steel tank mounted on suitable car underframe. This car is authorized for liquefied petroleum and liquefied hydrocarbon gases.

The container is tested before lagging is applied, at 100 lbs. per sq. in. hydrostatic pressure with water or other liquid of similar viscosity heated to 100° F.

The second type of tank car is the I.C.C. 105-A Class, of which there are four designed for as many different service pressures. These cars are single lagged welded steel tanks mounted on suitable underframe.

They are authorized for the following service, the final figure in the type designation indicating the retest pressure for which the container is designed and consequently the determining factor in the service authorized.

105A-300—Anhydrous Ammonia, Chlorine, Liquefied Petroleum Gases, Liquefied Hydrocarbon Gases, Methyl Chloride, Sulphur Dioxide, and Dichlorodifluoromethane.
105A-400—Liquefied Petroleum and
105A-500—Liquefied Hydrocarbon Gases.
105A-600—Hydrogen Sulfide and the Liquefied Hydrocarbon Gases.

Like the tanks in the first class mentioned, these must also be retested at the pressures indicated every two years.

Multiple Unit Car

The third type of tank car is the so-called multiple unit car designated as I.C.C. 106A-500 and 106A-800, respectively. The containers are unlagged, welded steel, having a capacity of not less than 1,600 lbs. of water, nor more than 2,600 lbs. of water. They are mounted on a car structure that accommodates 15 or more containers.

Each container is equipped with safety valves or devices sufficient to prevent the building up of pressures in the tank in excess of ¾ of the test pressure, which for the two classes of containers of this type is 500 lbs. per sq. in. and 800 lbs. per sq. in. respectively.

These containers are authorized for service as follows: 106A-500 for anhydrous ammonia, chlorine, sulphur dioxide, methyl chloride, the liquefied petroleum and hydrocarbon gases, and dichlorodifluoromethane (F-12).

(*Extracts of a paper read before the Chemical Section of the 21st Annual Safety Council in Washington, D. C., Oct. 4, 1932.)

THE GREAT SAHARA

is NO DRIER than ANSUL ANHYDROUS ANALYZED SULPHUR DIOXIDE

ANSUL CHEMICAL COMPANY • MARINETTE • WIS

Does The Cabinet Sell The Refrigerator?

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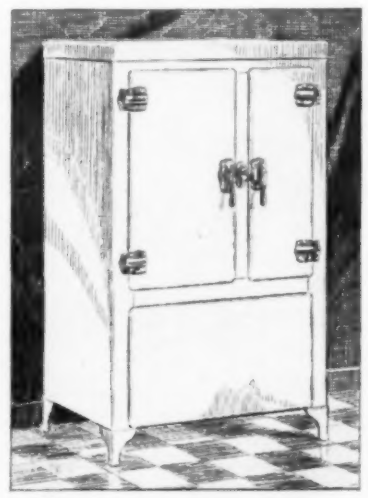
We have unequaled facilities for the designing and manufacture of refrigerator cabinets in wood or steel, or combination wood and steel, and our Engineering Department is always at your service.



Our immense plant embodies a large, fully equipped steel plant, large production machine shop, a wood working plant second to none, and all equipped with the most efficient automatic and labor-saving machinery for rapid high quality service.

Ask for quotations on your cabinet requirements.

Hamilton Mfg. Co.
Two Rivers, Wis.

ELECTRIC REFRIGERATION NEWS

Registered U. S. Patent Office

The business newspaper of the refrigeration industry

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SALES AT DAIRY EXHIBIT REFLECT BUSINESS UPTURN

Commercial Machines Are Displayed At Exhibition

By Phil B. Redeker

DETROIT—With many exhibitors reporting a "lookup" in conditions because of actual business transacted, and a near record mark in attendance set, the 1932 Dairy Industries Exposition passed into history here Saturday night.

The booths presenting the products of five leading manufacturers of domestic and commercial refrigeration—Frigidaire, General Electric, Kelvinator, Servel, and Universal Cooler—were among the most popular at the show.

The booth of the Kold-Hold Co. of Greenville, Mich., manufacturer of a eutectic brine method of storing refrigeration for commercial applications, also attracted considerable attention.

Among the new developments exhibited, solid carbon dioxide applications with positive temperature control probably drew the greatest amount of interest. International Carbonic Engineering Corp. demonstrated applications of solid CO_2 to commercial showcases, domestic refrigerators, ice cream cabinets, and an air conditioner.

Fitz Gibbon & Crisp made its first showing of the new "thermo-flow" system in which solid CO_2 is used, and

(Concluded on Page 2, Column 4)

KELVINATOR TO HOLD CHRISTMAS CONTEST

DETROIT—"'Jud' Sayre's Christmas Campaign" sales contest is to be sponsored by Kelvinator Corp. from Nov. 1 to Dec. 24, according to Vance C. Woodcox, advertising and sales promotion manager.

"In the past, we have given the selling organization generalized sales campaigns. This year we are giving them 'Jud' Sayre's Christmas Campaign, which we think is the best planned and best presented campaign Kelvinator has yet offered its outlets," states Woodcox.

The Christmas Silver Seal will be a feature of the campaign again this year, as last year. This seal is smartly boxed, and is engraved as the purchaser desires, with "To Mother from Dad" or some such message. It is to be attached to the front of the new refrigerator when presented as a Christmas gift.

A Kelvinator savings bank is to be put to work again this year. A schedule of daily deposits in this bank will enable the prospect to save money for the down payment at Christmas time.

In order to help find, reach, and cultivate prospects, a food store sales plan is to be employed. A demonstration and display of Kelvinator refrigerators in

(Concluded on Page 4, Column 5)

Westinghouse Dollar Volume In September Shows Increase

WESTERN UNION

MANSFIELD, OHIO.

GEORGE TAUBENECK, ELECTRIC REFRIGERATION NEWS—550 MACCABEES BLDG., DETROIT, MICH.

WESTINGHOUSE REFRIGERATOR BUSINESS SHOWS BIG INCREASE ORDERS ENTERED DURING SEPTEMBER WERE FIFTY NINE PER CENT OVER PREVIOUS MONTH IN DOLLAR VOLUME AND SEVENTEEN PER CENT AHEAD OF SEPTEMBER NINETEEN THIRTY ONE STOP WE EXPECT TO MAKE OCTOBER BIGGER THAN EVER

WESTINGHOUSE R. C. COSGROVE.

THOMPSON HENCHMEN POLL BIG G. E. VOTE

CLEVELAND, Oct. 24.—(Special Wire to ELECTRIC REFRIGERATION NEWS)—W. L. "Bill" Thompson of Gentsch-Thompson, Inc., General Electric distributor in Boston, polled a total of 30,723 votes last week, leading all other distributors for that period, in the Monitor Top Election Campaign, sales contest being sponsored by General Electric Co. Consequently he moved up from twelfth place to ninth.

Albert Ahrens, Oklahoma City distributor, obtained the second largest number of votes for the week, 27,740; L. W. Driscoll, General Electric distributor in Charlotte, N. C., was third receiving 27,352 votes; and H. H. Kelly Courtright, of Fresno, Calif., fourth, with 24,288. Only two weeks more of the contest remain.

The leading candidates for president of Refrigerania are Albert Ahrens, who has led all the other candidates since the polls were opened; M. E. Brown of A. H. Thompson-Sterling of Louis-

(Concluded on Page 4, Column 3)

REALTORS OBJECT TO NEW DETROIT CODE

By John T. Schaefer

DETROIT—A Detroit code meeting which opened with the prospect of constructive discussion of Detroit's adoption of the A.S.R.E. Standard Code, and promised consideration of F-12 and air conditioning, was brought to a standstill last Thursday and finally adjourned because of the opposition of real estate and commercial interests who maintained the existing code has not permitted excessive accidents, and that tax payers should not now be burdened with the cost of new civic legislation.

The meeting was called by H. H. Mills, chief safety engineer of the Department of Buildings and Safety Engineering, and presided over by Joseph P. Wolff.

Commissioner Wolff opened the session by pointing out that important developments in refrigeration, particularly

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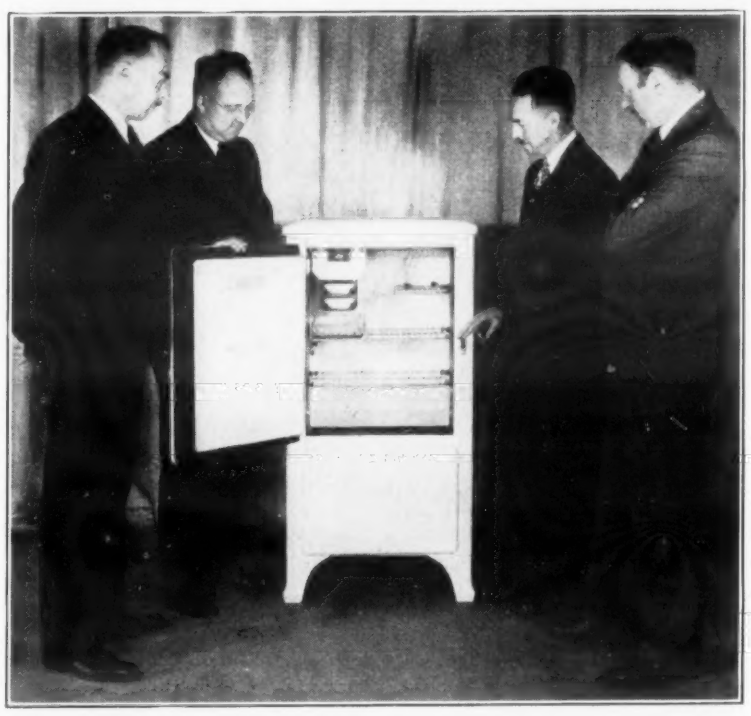
Kelvinator's 'Baby' Christened



Cabinet Engineer Don Ellis, Vice President in Charge of Sales H. W. Burritt, Manager of Cabinet Engineering C. C. Thomas, and Assistant to the President H. G. Perkins inspect Kelvinator's New R-42 model, which will sell for $112 f.o.b. Detroit.

COMMERCIAL UNITS RULED TAX EXEMPT

WASHINGTON, D. C.—Refrigerator parts or units, designed primarily and solely used for commercial purposes, are exempt from the federal excise tax, according to the Bureau of Internal Revenue in a series of recent rulings.

Parts used on household types of refrigerators are exempt from the tax if sold separately, states the ruling. Following is the full text of the ruling:

"Refrigerator parts or units, designed primarily and solely used for commercial purposes, are exempt from tax. These include ice cream cabinets, ice cream cabinet units, water coolers, lens chillers, and refrigerating units for commercial transportation equipment.

"For purposes of the tax, refrigerator parts and accessories are divided into three groups, viz:

"(1) Household and interchangeable parts.

"(2) Commercial parts.

"(3) Standard purchase parts (com-

(Concluded on Page 2, Column 5)

Prices

Installed-in-Detroit prices as of Oct. 22, and key specifications of 13 makes of household electric refrigerators being retailed in the Detroit area are published in a table appearing on page 4 of this issue of Electric Refrigeration News.

1933 KELVINATOR LINE FEATURES $112 MODEL

High-Side Refrigerant Control and Defrosting Method Feature 16 New Models

DETROIT—Meeting competition with two new low-priced refrigerators (priced at $112 and $149 in Detroit), Kelvinator Corp. is introducing its 1933 models at the factory here this week. All new Kelvinator models are distinguished from last year's line by the adoption of a high-side float refrigerant control, and the application of a new electrical control by which defrosting can be accomplished without losing refrigeration in the cabinet, and maintaining frozen ice cubes during the defrosting period.

A total of 16 standard models are offered for 1933, with the models grouped in four different lines. The new R line contains two models, the K line has four models, the PK line five models, and the D line comprises five standard models; two additional models in the D line being specially built to order.

Complete specifications of the new line are tabulated on page 2 of this issue.

The two R models have an eight-point temperature selector mounted on the evaporator baffle plate. R-42 has 4.18 cu. ft. of net food storage capacity (Nema), 8.38 sq. ft. of shelf area, and produces 42 ice cubes in two trays, one of which is a fast-freezing tray.

R-64 has 6.37 cu. ft. net cubage, 13.25 sq. ft. of shelf area, and three ice cube trays making 63 ice cubes. Again, one ice cube tray is fast-freezing. R models are finished outside in lacquer, inside in porcelain.

The four K models have Kelvinator's automatic three-zone temperatures, food preservation temperatures in the cabinet itself, freezing temperatures in the

(Concluded on Page 11, Column 4)

MOHAWK ANNOUNCES COMMERCIAL MODELS

NORTH TONAWANDA, N. Y.—The All-American Mohawk Corp. is now offering its new 1933 line of Mohawk commercial condensing units. The line is comprised of air- and water-cooled units from one-third to two hp. for general refrigeration service, and heavy-duty watercooled units from one to three hp. designed to operate at higher back pressures for air conditioning, water cooling, etc.

Compressors are of the two-cylinder, reciprocating type, except in the case of the two- and three-hp. units which are three-cylinder. Drives are the V-belt type. The crankshaft, which is of forged steel hardened and ground, is provided with heavy bronze bearings.

Cylinders are cast in one block, ground and honed to size. Pistons are of cast iron, ground to size and provided

(Concluded on Page 4, Column 4)

2,250,000th Frigidaire Arrives In New York After World Tour

NEW YORK CITY—"It's just like losing an old friend," said Chief Steward W. G. Hines as he saw the 2,250,000th Frigidaire carried down the passengers' gang plank of the *SS President Pierce*, here, following a tour of the world. The trip started from San Francisco on July 22 and included more than 20 ports of call.

Captain Henry Nelson, commanding the Dollar liner, turned over the log of the round-the-world refrigerator to C. M. Eakin, manager of the company's New York operations, and other representatives of Frigidaire who were at the pier on the ship's arrival.

At the homecoming ceremonies, Eakin announced that the 2,250,000th unit will be sent on a tour which will include many of the largest cities of the United States before it goes to Chicago, where it will be a feature of the Frigidaire display at the World's Fair.

Steward Hines had the refrigerator in operation in the main dining salon throughout the round-the-world cruise, using it to store salads and desserts for table service, and to make ice.

"We encountered lots of hot weather during the trip, and although we invariably used up all the ice at lunch time, we always had a full supply for tea three hours later," stated Steward Hines. Outside temperatures ran as high as 104° F. at Manila, Singapore, and Bombay, according to Chief Engineer J. D. Curley, who kept a check on the refrigerator's performance.

The 2,250,000th Frigidaire came off one of the company's eight assembly tracks in Dayton, on July 8. It was

(Concluded on Page 4, Column 4)

* * *

Eakin Greets World Traveler

C. M. Eakin (left), Frigidaire's New York manager, receives the 2,250,000th unit from Manager G. S. Hinkins of the Dollar Lines.

Kelvinator Promotional Plans Described By Woodcox In Talk

By Phil B. Redeker

DETROIT—A carefully planned presentation that "sold" dealer outlets on the use of sales promotion material, and a related and interwoven promotional campaign which made retail selling easier, were two of the main factors that brought about Kelvinator's increase in business during the past fiscal year, Vance C. Woodcox, advertising and sales promotion manager, told members of Detroit's Adcraft club at a meeting held Oct. 21.

Mr. Woodcox outlined the way in which the "Local Leader" plan induced the retail outlets to stock their floors with merchandise and to use sales promotional material; and how the "Food Store Demonstration" plan increased the efficiency of sales effort through concentrated activity and directed use of promotional aids.

"One of the big items in the sales promotion department's budget is the inventory of sales promotion literature," Mr. Woodcox began. "It is necessary to move these items in groups, which calls for a program that will 'sell' these items to the retail dealer."

One of the main steps in convincing a dealer that he should use the sales promotional plan is to offer him proof that the program will work, Mr. Woodcox stated. In order to do this, considerable testing is often necessary, and Kelvinator's sales promotional department carried out its testing in the following manner:

A survey was made which showed that in every town in which there was a potential market of 100 sales, an average of four dealers were operating.

It was also found that the proportion of sales going to the various dealers would run something as follows—A dealer, 50; B dealer, 25; C dealer, 15; D dealer, 10.

Thus one dealer, the "sparkplug" outlet in the town, was getting as much business as all the other dealers combined.

"The job of the factory organization is thus to make its dealer the 'sparkplug' dealer wherever refrigerators are sold," Mr. Woodcox brought out.

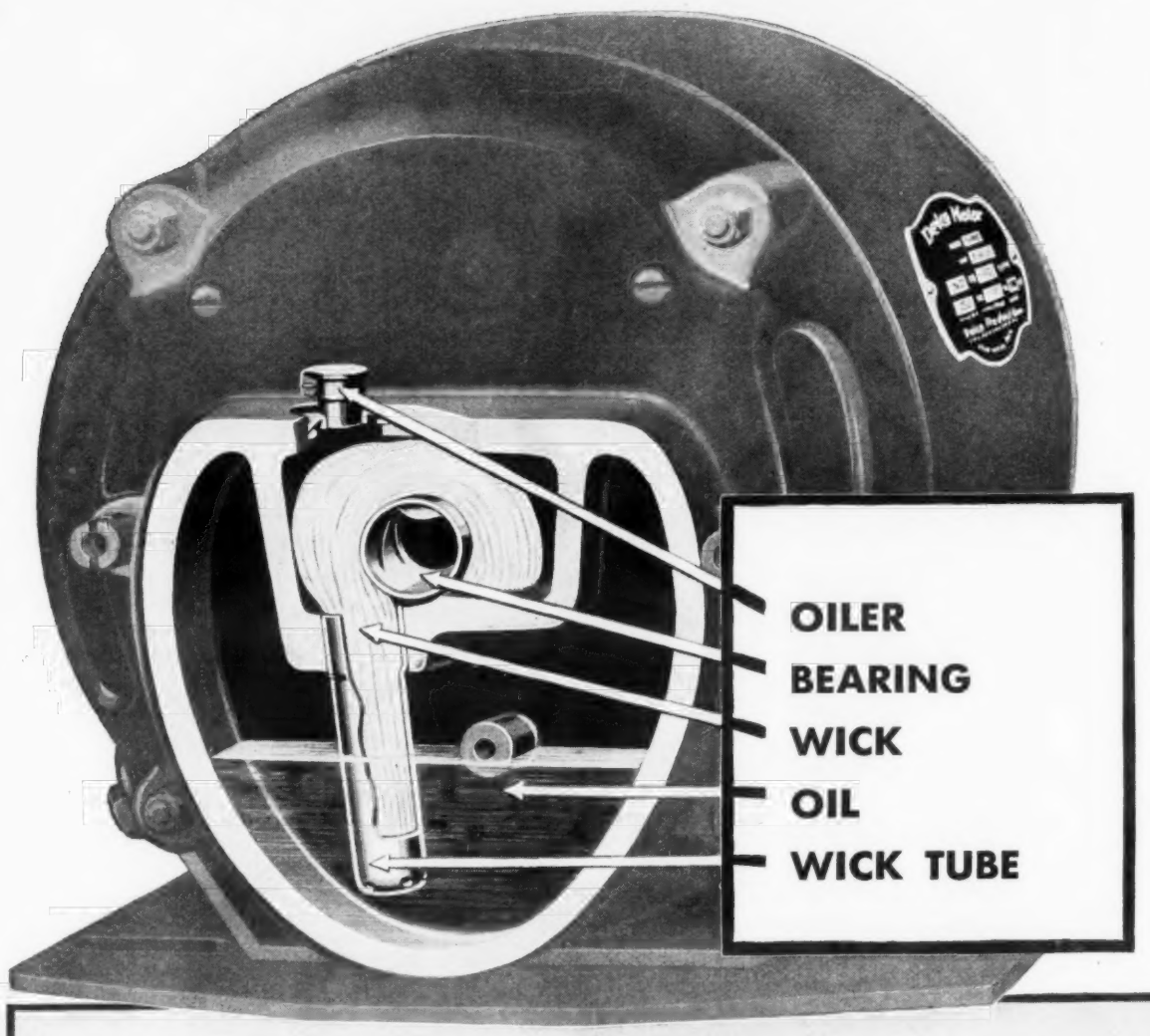
"We thereupon instituted a test to see if we could make one of our dealers the 'sparkplug' in his community through the intensive use of our sales promotion material.

"Holland, Mich., was selected as the test town, and in February, 1931, the Kelvinator dealer put all our sales promotion material into effect.

"During that month the dealer outstripped his competition and sold more refrigerators than he had merchandised in any three months of the preceding year.

"We had our proof. Our next job

(Concluded on Page 4, Column 1)



DELCO MOTORS WITH

SEALED LUBRICATION

DELCO MOTORS with Sealed Lubrication are as easy to install and as accessible as the conventional motor for exposed installation. Developed expressly for refrigeration service, they incorporate the principles of design that have proved so successful in millions of Delco refrigerator motors in service today. Their new bearing design, which seals the bearings against trouble, has passed every reasonable service test. It keeps the oil at the bearing, even if the motor is tipped on end or shipped upside down. It insures a positive oil supply to the bushings. It automatically returns all excess oil to the reservoir. Sealed Lubrication is available only in Delco Motors.

DELCO PRODUCTS CORPORATION

DAYTON, OHIO

Sales Increase At Dairy Show

(Concluded from Page 1, Column 1)

Foremost Refrigeration, Inc., of Brooklyn exhibited its line of ice cream cabinets which have been used in the East during the past year.

Frigidaire's exhibit was representative of its entire line of products, including ice cream cabinets, soda fountain unit, household cabinets, water coolers, air-conditioning equipment, wet storage type milk cooler, commercial units, ice cream truck units, and dry storage type milk cooler.

A small porcelain enamel bake oven was installed in the booth and visitors were invited to write their name on ash trays, the names then being "baked" into the tray.

G. E. Ice Cream Cabinets

The General Electric line of ice cream cabinets was featured in the General Electric exhibit. A cutaway model was shown to demonstrate points of construction. In addition to other commercial products, such as milk coolers and water coolers, part of General Electric's line of domestic units, including the conventional or "Junior" model, was exhibited.

At last year's Dairy Exposition, Kelvinator exhibited a mechanically-refrigerated truck unit powered by the Kelvinator patented constant-speed drive. At the Kelvinator exhibit this year a working model of this drive, demonstrating the way in which compressor speeds remained constant at all engine speeds, was a center of attraction.

Also exhibited in the Kelvinator space were ice cream cabinets, commercial condensing units, domestic refrigerators, and water coolers.

Servel Exhibit

The Servel, Inc., exhibit embraced products of Servel, Electrolux, and Hercules Products. Two beauty prize-winners serving ice cream cones from Electrolux ice cream cabinets proved a magnet in attracting visitors to the show. Servel's new "Humidraft" unit for milk storage rooms, and a Esco cabinet cooler refrigerated by a Servel unit, were main items of interest in the Servel section.

Two Hercules truck bodies, one refrigerated by a Servel compressor, and the other by a new solid CO_2 unit using methyl chloride as a secondary refrigerant, attracted the attention of many visitors interested in truck refrigeration.

Universal Cooler Displays

Universal Cooler Corp. exhibited the latest design in commercial refrigerating units in capacities up to 3 tons.

York, Frick, and Vilter were manufacturers of large-size industrial refrigerating equipment which had displays at the exposition.

York makes a number of products outside of the refrigeration field for the dairy industry, but its exhibit included the new self-contained farm milk-cooling unit, enclosed ammonia compressor with direct-connected electric motor, and dry-coil air conditioner for ice cream freezing and hardening rooms.

Frick exhibited its new Frick instant ice water cooler, operated by a 4x4 in. Frick combined refrigerating unit, for use in plant milk-cooling operations.

Vilter's new rotary compressor was in operation in the Vilter booth, cooling a coil which was shaped up like a floor lamp.

Representatives at Show

Representatives in the Frigidaire booth included: B. J. Vandoren, C. E. Russell, A. Truscott, C. L. Barlow, M. D. Weisenbarger, L. E. Smith, D. C. McCoy, Fred Kinch, H. M. Williams, J. G. King, R. E. Robillard.

J. B. Breen, A. C. Freiman, C. B. Gamble, M. A. Spayd, D. R. Gault, J. G. Harris, C. T. Mutchner, R. A. Sommerville, M. E. Cutler, R. N. Merritt, H. A. Beck, E. S. Riley, Carl Haschke.

J. R. Killen, D. C. McCoy, J. P. Hughes, P. B. Toohey, J. L. Gibson, P. F. Bunger, C. J. Kussman, E. E. Milburn.

General Electric representatives were: W. E. Landmesser, Chester Lichtenberg, F. M. Corliss, H. T. Hulett, J. L. Knight, C. T. McLaughlin, J. J. Curtin.

Representing Kelvinator Corp. were George Mason, H. W. Burritt, E. R. Kelley, R. M. Martin, E. R. Legg, R. J. Scheu, H. B. Johnson, A. P. Hawkins, R. N. Palm, A. J. Lutz, D. J. Bowen, H. L. Gossom, F. C. Graham, Paul Parker.

In attendance at the Servel exhibit were: F. E. Sellman, C. A. Miller, G. L. Roach, J. M. Clarke, W. J. Aulsebrook, C. J. Conkey, G. K. Specht, O. H. Olsen, B. E. Karges, Herman Pretz, L. A. Morrell, A. W. Grossman.

Representatives of Universal Cooler Corp. included G. M. Johnston, F. J. Gleason, H. E. Thompson, J. H. Nugent, T. S. Pendergast, H. B. Ellenson, W. W. Higham, C. L. Curtis, H. D. Burnside, W. J. Freeborn, G. F. Price, C. E. Costain.

PETRIE TO CONDUCT SALES SCHOOLS IN WEST

DETROIT, Oct. 25.—R. I. Petrie, sales manager of the Leonard Refrigerator Co., will leave tomorrow for Denver and Salt Lake City, Utah, where he will conduct wholesale sales schools.

REALTORS OBJECT TO NEW DETROIT CODE

(Concluded from Page 1, Column 2)

such new applications as air conditioning, render the existing Detroit code unsuited to present conditions.

He reported the findings of a special committee, appointed several months ago to study the situation, which urged adoption of the A.S.R.E. code.

Quick to rise in opposition was John L. Lovett of the Michigan Manufacturers Association, who predicted that acceptance of the code would mean additional fees. Supporting him were Charles E. Boyd of the Retail Merchants Association, and F. G. Ell of the Greater Detroit Builders Association.

These men argued that the body could not consider action until the administrative portions of the ordinance were worked out and understood by all. They were especially insistent that no additional fees should be levied.

George Bright of the George Bright Co. and A. G. Loeffel of the Detroit City Service Co. spoke in behalf of the proposed code, and pointed out that refrigeration installations are often made without necessary safety precautions.

Glenn Muffly, refrigeration division, National Electrical Manufacturers Association, explained the origin and development of the A.S.R.E. code, and told where it has been adopted.

Commissioner Wolff reported that no new fees would be entailed by the new ordinance, and said that the department was actually considering a reduction in present inspection fees.

Attending the meeting were: L. L. Adams, George B. Bright Co.; A. G. Loeffel, Detroit City Service Co.; Theodore Hoye, Borden Farm Products Co.; J. W. Quaine, Detroit Creameries; R. C. Loughead, Michigan Inspection Bureau; A. C. Wallich, Carrier Corp., Detroit; William Higham and Ralph Baum, Universal Cooler Corp.

F. G. Ell, Greater Detroit Builders Association; Theodore W. Weigele, Detroit City Gas Co.; Frank Converse, Detroit Fire Marshall's office; E. T. Williams, Servel, Inc., New York City; John T. Schaefer, ELECTRIC REFRIGERATION NEWS.

H. J. Hodges, Detroit City Service; Thos. P. Heter, Hartford Steam Boiler Inspection and Insurance Co.; Glenn Muffly, Refrigeration Division, National Electrical Manufacturers Association, New York City; John L. Lovett, Michigan Manufacturers Association.

Carlos J. Jolly, General Motors Corp.; Chas E. Boyd, Retail Merchants Association; George Palmer, McCord Radiator & Mfg. Co.; J. L. Gibson, Frigidaire Corp., Dayton; C. C. Spreen, consulting engineer, Detroit.

COMMERCIAL MACHINES ARE EXEMPTED FROM TAX

(Concluded from Page 1, Column 3)

mercial commodities not primarily designed for use on or in connection with refrigerators).

"Any of these parts are taxable if sold on or in connection with or with the sale of household type refrigerators or refrigerator components, but if sold separately no tax attaches, as, for example, sales to dealers for repair of refrigerator components.

"Refrigerator gas, coiled copper tubing, and similar items are exempt from the tax under section 608(b) of the Revenue Act of 1932, because these articles belong to the general class of standard merchandise used in many industries. The producer or importer of the lubricating oil which is sealed into certain types of mechanical refrigerators may sell such oil tax free, under certificate, to manufacturers of household type mechanical refrigerators for such use.

"When goods are shipped prior to June 21, 1932, by bill of lading consigned to either the seller or to the buyer and the bill of lading with draft attached is sent to the bank for collection, but the draft remains unpaid on June 21, 1932, the goods are subject to tax.

"In the foregoing cases of shipping by bill of lading, if the bill of lading was prior to June 21, 1932, indorsed and discounted with a bank, acceptance company, or discount company, title passed to the transferee prior to that date and, consequently, the shipment was not subject to tax.

"Any merchandise returned must be conclusively identified as having been tax paid before any refund or credit of the tax can be secured.

"In billing to a distributor or dealer a manufacturer often adds a specific charge for advertising and service guarantee. Such additional charges may be excluded from the selling price upon which the tax is computed if it can be established that the value of the services equals or exceeds the amount collected from the customer. If it is less than the amount collected, a tax must be paid upon the difference.

"In any event, such items must be shown separately on the invoices before they may be excluded in computing the tax. All national advertising is an expense of the manufacturer and must be borne by him and not made chargeable against the customer's advertising reserve. Charges to customers for advertising should cover only local advertising."

Six Steps

in the Business Building Program that increased Frigidaire Sales Volume by

28%

If you want to know the reason why Frigidaire household sales in September were 28% greater in dollars and cents than in August, read these six important steps in Frigidaire's complete Business Improvement Program:

1. Sensational, *new low price*—$112 (plus freight), with Federal tax paid—the lowest price at which a *genuine** Frigidaire has ever been sold.
2. A revolutionary development—STATAFLEX—which gives ¼ more food space in the same sized cabinet.
3. A half-million dollar advertising campaign—concentrated in 90 days' time.
4. A nation-wide Radio Contest, offering a Cadillac and four other General Motors cars as grand prizes, and 40 additional prizes.
5. New low prices on three All-Porcelain Frigidaires.
6. A new Book, "Saving Money," containing the complete Frigidaire sales story, one of the most result-producing books ever prepared to help salesmen sell Frigidaire.

Intelligently planned—honestly won—Frigidaire's present increase in business is a forecast of what future prospects may be!

FRIGIDAIRE

A General Motors Value

***WARNING!** A cheap, underpowered and poorly constructed refrigerator at any price is expensive for you to sell. Customer satisfaction—your greatest asset—is assured with this genuine Frigidaire. Nothing has been "cheapened." It is the same Super-Powered, two cylinder Frigidaire made and guaranteed by Frigidaire Corporation, a subsidiary of General Motors.

Woodcox Explains Kelvinator Sales Promotion Plans To Adcrafters

(Concluded from Page 1, Column 5)

was to incorporate it into a presentation for the use of our wholesale field men that would serve to make the dealer sales promotion minded.

"This presentation evolved in the form of a 'Local Leader Plan Book' to which the report of the Holland test served as the introduction. The contents of the book were divided into sections, as follows:

"Section 1 dealt with a plan for a 'grand opening' week if the dealer was new, or a 'special Kelvinator week' if the dealer was established.

"This plan dealt with the possibilities in a cooking school, and the correct manner of putting on such a school. Types of newspaper advertising, publicity methods, use of small and dignified invitations to select prospects, were discussed in this section.

"Types and proper use of educational equipment, such as floor literature and descriptive pamphlets, were taken up in the second part of this section.

"One page was left blank on which the wholesale salesman could tip in letters from other dealers showing the success which other dealers had found by using the program.

"Order blanks were placed in the back of the book, together with a table showing the number of refrigerators and the amount of sales promotion material that a dealer with a certain potential market should take on.

"A small series of direct mail was offered free of charge to any dealer who would promise to send this literature to a prospect and also make three personal calls on this prospect within 30 days time.

"This latter plan encouraged the dealer to make personal contact with his prospects, and bettered his chances of making a sale."

A "Local Leader Plan Book" was prepared for every city in the United States with a population of 1,000 or more. The pamphlet was personalized by the various distributors, who inserted the name of the dealer or prospective dealer and the name of the town in which the outlet was located.

This planned program resulted in the distribution of more than one million handbills in the spring of 1932, of the delivery of more than 25,000 jig saw puzzles (novelty gifts for prospects) during the same period. These figures represented a tremendous increase in the use of sales promotional material.

The Local Leader plan accomplished its purpose from the wholesale standpoint—it put merchandise on the dealer's floor and encouraged him to distribute literature, which in turn served to make the dealer outlet known to the buying public.

The next need was for a retail selling plan that would enable the dealer to make intelligent use of his sales promotion tools and to move the merchandise off his floor.

"We decided that we needed a plan that would supplement the cold canvass," Woodcox relates, "a plan that would put prospects 'on the spot' for the salesman. We hit upon the 'Food Store Demonstration Plan' to fill this need.

"The dealer would approach a local food store merchant and explain the plan to him, which was simply that if the merchant would hold a special sale on a week-end, the refrigeration dealer would distribute handbills throughout the neighborhood telling of the sale.

"The dealer would also get permission to set up a display consisting of one refrigerator, a supply of groceries consisting of small lots on one side and large lots on the other. These two lots of groceries told the story of how savings amounting to $11.80 monthly could be made through quantity purchases which would be possible only if the customer had an electric refrigerator.

"Thursday, Friday, and Saturday were found to be the best days for this demonstration. Handbills telling about the grocer's sale and the refrigerator demonstration, in connection with which a door prize (usually a set of dishes) was offered, were distributed on Wednesday.

"A salesman was in constant attendance in the store during the period of the demonstration. When the women stepped up to drop in their tickets for the door prize, they gave him the opportunity to tell the story of the Kelvinator money-saving possibilities, and to check upon their worth as a prospect.

"Each night the salesman qualified his prospects, and sent the first of a series of promotional pieces to the real prospects. Two more pieces were sent on succeeding days, and on the fourth day a salesman contacted the prospect.

"Because he had met the prospect at the store, and because she had been reminded of him by the mailing pieces, he was usually given *entree* to the home and the 'cold' was thereby eliminated from the cold canvass.

"Compilations of results of this plan in various dealerships has demonstrated that an average of 200 women are contacted during the 3-day period of the demonstration. Of these, about 10 per cent are real prospects. Eliminating another 20 per cent, this means that about 16 real prospects are left.

"Our statistics show that two sales were made in the first week after the demonstration, and that 14 good prospects were left for follow-up calls.

"The Food Store Demonstration Plan has eliminated the 'fits and starts' in prospect-getting activity. Tests made in Detroit indicate that the cold-canvasser can't get into more than 200 homes per month. The food store plan enabled the salesman to contact in three days the same number of people that he could contact in 30 days by the cold canvass method."

Kelvinator has increased its sales promotion budget for the next fiscal year and will enlarge upon its promotional plan, Mr. Woodcox stated.

THOMPSON FORCES CAST LARGEST G. E. BALLOT

(Concluded from Page 1, Column 2)

ville, Ky.; and H. A. "Hap" Pendergraph, Tennessee candidate.

N. K. Ovalle, Harrisburg, Pa.; R. Cooper Jr., Chicago distributor; and A. Wayne Merriam, distributor in Albany, N. Y., are leading their districts and are in line for cabinet posts.

Candidate H. H. "Kelly" Courtright of Fresno, Calif., who two weeks ago was more than 27,000 votes behind L. H. Bennett, San Francisco distributor, cut that lead down last week to but 14,000, and is determined to overtake Bennett during the next two weeks of the campaign for leadership of the Pacific Coast.

When the returns were tabulated for the week of Oct. 10, Courtright was 15 places behind Bennett. He is now only eight places behind.

NEW CONCERN ORGANIZED TO SELL PRIVATE BRAND

DAYTON—Domestic Engineering Co. has been formed to market private brand household electric refrigerators through selected department stores and large furniture stores. C. T. Lawson is sales manager of the new organization.

In announcing the move, Lawson states:

"General Motors recognizes the importance of the modern department store as a retail outlet for electric refrigerators, and through the Domestic Engineering Co. has established an alliance with a select group of leading department stores."

A deal has been made with Frigidaire Corp. whereby these private brand refrigerators will be manufactured in the Frigidaire plants at Dayton.

Frigidaire Unit Completes Tour

(Concluded from Page 1, Column 2)

shipped to San Francisco, and started on its round-the-world tour with gala ceremonies attended by high officials of both Frigidaire Corp. and the Dollar lines.

At Honolulu, the von Hamm-Young Co. gave it a reception in which the mayor of Honolulu, the governor of the islands, and many leading citizens took part. The speeches and musical program were broadcast throughout the islands by station KGU.

Municipal and port officials, together with many guests, were entertained aboard the vessel at tea during its stop in Kobe, Japan. The main dining salon was decorated with artificial cherry blossoms for the occasion.

At a party given by Macondray & Co., Manila dealers, members of the Rotary Club of that city and their wives were among the guests aboard ship.

In the harbor at Shanghai, visitors were brought aboard in tenders as ships anchor across the river from the Bund.

Probably the most colorful party of the entire list was that given by Leon Rubay, Frigidaire dealer at Marseilles, France. He planned his celebration in a big way, sent out hundreds of special invitations, and served several cases of champagne.

The list of ports visited also included Yokahama, Hong Kong, Singapore, Penang, Colombo, Bombay, Suez, Port Said, Alexandria, Naples, and Genoa.

MOHAWK ANNOUNCES 1933 COMMERCIAL MACHINES

(Concluded from Page 1, Column 5)

with three rings. The sealing faces of the valves and shaft seal are ground and lapped to a gas-tight fit. The seal face is of a self-lubricating metal running on a hardened and polished steel ring.

Air-cooled units are provided with fin-type condensers of large area, while the water-cooled units are provided with double pipe counterflow condensing coils with automatic water control valves, designed to prevent waste of water.

The whole condensing unit is mounted on a compact, rigid base, and provided with legs to facilitate cleaning around and under the unit. All parts of the assembly are of easy access for service.

Complete information regarding the new line including price list, data sheets, and complete specifications are now in the hands of the Mohawk distributors.

KELVINATOR TO HOLD CHRISTMAS CONTEST

(Concluded from Page 1, Column 4)

stores where women buy food will be arranged by dealers.

One of the most important elements in this Christmas activity, according to Woodcox, is the three-piece series of direct mail folders, printed in four colors and silver.

The first folder is entitled "The Silver Seal Points the Way to a Happy Christmas"; the second, "A Christmas Wish Come True"; and the third, "A Christmas Pledge for 1932."

A recipe calendar, 12½x19 in., with a reproduction of a famous Whistler etching, and a pocket beneath the 12-month calendar pad containing an indexed file of recipes, affords the Kelvinator salesman a new and different door-opener or good will builder for the Christmas campaign.

For the selling of DeLuxe models a special campaign is planned for salesmen. A personal letter from President George Mason of Kelvinator, and an individualized DeLuxe presentation portfolio will be sent to selected prospects whose names the salesman sends to the factory.

As an added incentive there will be a "There is a Santa Claus" contest run in connection with the Christmas campaign. A trip to Detroit with all expenses paid wil be given by President Mason to the leading salesman in each district manager's territory as the first prize.

Vice President Burritt will present a gold watch to the leading salesman in each distributor's territory. Sales Manager Sayre will give a surprise prize to the wife, mother, or sweetheart of the leading salesman in each distributor's organization midway during this contest.

Local contests are to be tied in with the national contest.

SPARTON DECLARES DIVIDEND ON PREFERRED STOCK

JACKSON, Mich.—Two regular quarterly dividends of $1.50 per share of preferred stock, payable Sept. 30 and Dec. 15 to stock of record Sept. 26 and Dec. 8, respectively, were declared recently by Sparks-Withington Co., Sparton refrigerator manufacturer.

Prior to their approval of the dividend payment, stockholders approved a reduction in the company's stated capital from $5,061,484 to $2,615,385.

This reduction was made possible by retirement of 12,850 shares of common stock held in the treasury, and a reduction of $2,193,537 in stated capital of remaining stock.

Retail Prices In Detroit Area of 13 Makes of Refrigerators

As Quoted by Retail Stores of Distributors and Factory Branches in City of Detroit

Kelvinator

Model	PRICE Installed	SIZE Net Cu. Ft.	SHELVES Square Ft.	ICE Cubes	ICE Weight	FINISH Porc.-Lac.
K-4	$109.50	4.0	8.1	42	3.4	Lac.
R-42	114.50	4.18	8.38	42	3.4	Lac.
PK-4	129.50	4.0	8.1	42	3.4	Porc.
K-5	132.50	4.94	10.34	63	5.1	Lac.
S-4	139.50	3.8	8.2	42	8.0	Porc.
K-6	145.00	5.94	12.16	84	6.8	Lac.
PK-5	149.50	4.94	10.34	63	5.1	Porc.
R-64	152.00	6.37	13.25	63	5.1	Lac.
S-5	169.50	4.8	10.4	42	8.0	Porc.
PK-6	169.50	5.94	12.16	84	6.8	Porc.
K-7	179.50	6.9	14.2	108	11.0	Lac.
PK-7	197.50	6.9	14.2	108	11.0	Porc.
D-6	229.50	6.38	12.1	108	20.25	Porc.
S-7	249.50	7.0	14.9	108	16.0	Porc.
S-9	410.00	9.2	16.8	108	16.5	Porc.

Guarantee on cabinet—one year. Guarantee on system—three years.

Mayflower

Model	PRICE Installed	SIZE Net Cu. Ft.	SHELVES Square Ft.	ICE Cubes	ICE Weight	FINISH Porc.-Lac.
F-34	$169.50	4.6	7.5	56	4.0	Lac.
F-35	185.00	5.0	9.5	84	6.0	Lac.
F-36	210.00	6.0	11.5	84	6.0	Lac.
F-55	185.00	4.0	7.0	56	4.0	Lac.
F-56	199.50	4.0	7.0	56	4.0	Porc.
F-65	205.00	5.0	10.0	84	6.0	Lac.
F-66	220.00	5.0	10.0	84	6.0	Porc.
FS-75	230.00	6.5	12.5	112	8.0	Lac.
FS-76	255.00	6.5	12.5	112	8.0	Porc.
F-75	255.00	6.5	12.5	112	8.0	Lac.
F-76	280.00	6.5	12.5	112	8.0	Porc.
F-86	335.00	8.0	14.5	112	8.0	Porc.
F-96	375.00	9.6	18.5	112	8.0	Porc.
F-24	129.50	4.0	7.5	84	6.0	Lac.
F-25	149.50	4.0	9.5	84	6.0	Lac.

Guarantee on cabinet—lacquer, one year; porcelain, three years. Guarantee on system—three years.

Leonard

Model	PRICE Installed	SIZE Net Cu. Ft.	SHELVES Square Ft.	ICE Cubes	ICE Weight	FINISH Porc.-Lac.
L-425	$114.50	4.18	8.37	42	3.4	Lac.
L-641	152.50	6.37	13.25	63	5.1	Lac.
L-451	172.50	4.68	10.14	63	5.1	Lac.
L-551	199.75	5.65	12.56	81	8.25	Lac.
L-651	229.50	6.77	15.02	108	11.0	Lac.
L-752	290.75	7.69	17.57	108	11.0	Lac.
PL-451	199.75	4.68	10.14	63	5.1	Porc.
PL-551	228.75	5.65	12.56	81	8.25	Porc.
PL-751	285.00	7.85	18.23	108	11.0	Porc.
PL-952	398.90	9.61	19.07	108	16.5	Porc.

Guarantee on cabinet—one year. Guarantee on system—one year.

Gibson

Model	PRICE Installed	SIZE Net Cu. Ft	SHELVES Square Ft.	ICE Cubes	ICE Weight	FINISH Porc.-Lac.
SG-35	$129.50	3.0	6.3	42	2.5	Lac.
SG-47	157.00	4.09	8.02	63	3.75	Lac.
PG-47	149.50	4.09	8.02	63	3.75	Porc.
SG-63	215.50	5.53	11.59	105	6.25	Lac.
PG-63	249.50	5.53	11.59	105	6.25	Porc.
SG-82	289.00	7.28	13.4	126	7.5	Lac.
PG-82	324.50	7.28	13.4	126	7.5	Porc.
SG-82B	335.00	7.28	13.4	126	7.5	Lac.
SG-148	550.00	12.5	20.1	210	12.5	Lac.
PG-148	590.00	12.5	20.1	210	12.5	Porc.

Guarantee on cabinet—one year. Guarantee on system—three years.

Copeland

Model	PRICE Installed	SIZE Net Cu. Ft.	SHELVES Square Ft.	ICE Cubes	ICE Weight	FINISH Porc.-Lac.
A-402	$119.50	4.02	9.08	63	4.1	Lac.
A-442	139.50	4.4	9.08	63	4.05	Lac.
A-522	154.50	5.2	11.15	81	5.3	Lac.
P-442	154.50	4.4	9.08	63	4.05	Porc.
A-562	159.50	5.61	9.08	63	4.05	Lac.
P-522	174.50	5.2	11.15	81	5.3	Porc.
A-612	189.50	6.17	12.75	108	6.95	Lac.
A-772	199.50	7.68	15.61	162	10.6	Lac.
P-612	214.50	6.17	12.75	108	6.95	Porc.
P-772	224.50	7.68	15.61	162	10.6	Porc.
D-682	264.50	6.83	12.75	108	6.95	Porc.
E-682	299.50	6.83	12.75	108	6.95	Porc.
D-932	339.50	9.36	15.61	162	10.6	Porc.
E-932	374.50	9.36	15.61	162	10.6	Porc.
E-1552	524.50	15.5	25.91	162	10.6	Porc.

Guarantee on cabinet—factory to distributor, 15 months. Guarantee on system—factory to distributor, 15 months.

General Electric

Model	PRICE Installed	SIZE Net Cu. Ft.	SHELVES Square Ft.	ICE Cubes	ICE Weight	FINISH Porc.-Lac.
GE-Jr.	$145.00	5.2	9.5	44	4.5	Lac.
S-44	177.00	4.4	8.0	48	3.5	Lac.
S-67	250.00	6.7	11.6	84	9.0	Lac.
P-63	260.00	6.3	11.3	84	9.0	Porc.
S-85	355.00	8.5	16.0	104	12.0	Lac.
S-107	465.00	10.7	20.0	104	12.0	Lac.
S-146	570.00	14.6	25.2	104	12.0	Lac.
S-182A	730.00	18.2	30.4	104	12.0	Lac.
P-4180A	740.00	18.2	26.6	104	12.0	Porc.
PS-65	270.00	6.7	11.6	84	9.0	Porc.
P-83	375.00	8.3	15.4	104	12.0	Porc.
P-110	440.00	11.0	20.4	104	12.0	Porc.

Guarantee on cabinet—one year. Guarantee on system—G. E. Jr., one year; others, four years.

Frigidaire

Model	PRICE Installed	SIZE Net Cu. Ft.	SHELVES Square Ft.	ICE Cubes	ICE Weight	FINISH Porc.-Lac.
S-4	$114.50	4.0	8.7	30	4.0	Lac.
S-5	140.00	5.0	10.2	42	6.0	Lac.
S-6	152.75	6.6	13.2	42	6.0	Lac.
WP-4	162.00	4.0	8.7	30	4.0	Porc.
WP-5	192.50	5.0	10.8	42	6.0	Porc.
WP-6	221.25	6.2	14.4	63	9.0	Porc.
WP-7	260.50	7.6	14.5	63	9.0	Porc.
WP-8	342.50	8.1	15.0	72	10.12	Porc.
WP-10	408.50	10.3	19.9	72	10.12	Porc.
WP-13	476.00	13.1	24.7	96	13.5	Porc.
WP-18	630.50	18.3	33.0	144	20.25	Porc.

Guarantee on cabinet—lacquer, one year; porcelain, three years. Guarantee on system—S line, one year; WP line, three years.

Sparton

Model	PRICE Installed*	SIZE Gross Cu. Ft.†	SHELVES Square Ft.	ICE Cubes	ICE Weight	FINISH Porc.-Lac.
L-42	$149.50	4.2	7.25	49	4.1	Lac.
L-57	210.00	5.7	10.19	77	6.7	Lac.
P-57	240.00	5.7	10.19	77	6.7	Porc.
L-75	282.00	7.49	14.7	91	9.3	Lac.
P-75	312.00	7.49	14.7	91	9.3	Porc.
L-106	387.00	10.6	19.0	108	10.5	Lac.
L-127	447.00	12.7	21.0	182	18.6	Lac.

*Tax extra.
†Net cu. ft. listings not available.
Guarantee on cabinet and system—model L-42, one year; all other models, three years.

Westinghouse

Model	PRICE Installed	SIZE Net Cu. Ft.	SHELVES Square Ft.	ICE Cubes	ICE Weight	FINISH Porc.-Lac.
WL-30	$158.00	2.7	4.7	36	3.5	Lac.
AL-30	160.00	2.6	5.3	36	3.5	Lac.
AL-45	165.00	4.2	8.4	54	5.25	Lac.
AP-45	195.00	4.2	8.4	54	5.25	Porc.
AL-60	219.00	6.1	11.4	96	11.0	Lac.
AP-60	261.00	6.1	11.4	96	11.0	Porc.
AL-73	257.00	7.2	12.8	96	11.0	Lac.
AP-73	298.00	7.2	12.8	96	11.0	Porc.
AL-90	328.00	9.0	15.7	96	11.0	Lac.
AP-90	369.00	9.0	15.7	96	11.0	Porc.
AP-130	513.00	13.5	24.8	192	21.0	Porc.
AP-200	702.00	20.1	37.7	192	21.0	Porc.

Guarantee on cabinet—one year. Guarantee on system—four years.

Majestic

Model	PRICE Installed	SIZE Net Cu. Ft.	SHELVES Square Ft.	ICE Cubes	ICE Weight	FINISH Porc.-Lac.
335	$110.50	3.5	8.5	42	3.75	Lac.
835	131.50	3.5	8.5	42	3.75	Porc.
345	141.50	4.8	10.7	42	3.75	Lac.
845	161.50	4.8	10.7	42	3.75	Porc.
245	173.00	4.0	9.7	43	4.0	Lac.
255	206.00	5.0	10.65	85	7.5	Lac.
275	228.50	7.0	12.52	85	7.5	Lac.
706	264.50	6.0	12.5	85	7.5	Porc.
710	462.50	10.28	18.8	170	15.0	Porc.
712	490.00	12.52	23.25	170	15.0	Porc.

Guarantee on system—models 335, 835, 345, and 845, one year; all others three years.

Servel

Model	PRICE Installed	SIZE Net Cu. Ft.	SHELVES Square Ft.	ICE Cubes	ICE Weight*	FINISH Porc.-Lac.
SC-3C	$143.50	3.7	6.7	42	...	Lac.
SB-3A	143.50	3.7	7.2	42	...	Lac.
SB-4	173.50	4.4	8.3	63	...	Lac.
SB-5B	183.50	5.5	9.3	63	...	Lac.
SB-7	271.00	7.5	13.6	72	...	Lac.
SB-9	370.00	9.4	18.5	72	...	Lac.
SB-11	430.00	11.5	21.4	96	...	Lac.

*Ice poundage not listed for Servel units.
Guarantee on cabinet—two years. Guarantee on system—two years.

Norge

Model	PRICE Installed	SIZE Net Cu. Ft.	SHELVES Square Ft.	ICE Cubes	ICE Weight	FINISH Porc.-Lac.
A	$145.50	4.25	9.2	63	5.4	Lac.
B	187.50	4.25	9.6	63	5.4	Lac.
BP	205.00	4.25	9.6	63	5.4	Porc.
D	208.50	5.6	12.3	105	9.0	Lac.
DP	239.50	5.6	12.3	105	9.0	Porc.
F	269.50	6.8	14.3	105	9.0	Porc.
H	435.00	11.1	20.95	168	14.4	Porc.

Guarantee on cabinet—lacquer, one year; porcelain, two years. Guarantee on system—two years.

Stewart-Warner

Model	PRICE Installed	SIZE Net Cu. Ft.	SHELVES Square Ft.	ICE Cubes	ICE Weight	FINISH Porc.-Lac.
89	$129.50	3.5	5.0	24	2.0	Lac.
90	159.50	4.4	8.3	42	4.0	Lac.
91	219.50	6.1	11.6	63	6.0	Lac.
92	279.50	7.5	12.7	63	7.0	Lac.

Guarantee on cabinet—one year. Guarantee on system—three years.

NEW KELVINATOR LINE COVERS EVERY MARKET

"Step-up Merchandise" Gives Kelvinator Franchise Still Greater Profit Potential

WITH the 1933 Kelvinator Line you would *never lose a sale* for the reason you did not have merchandise that meets the propect's requirements of *size, type,* and *price.* Every prospect is a Kelvinator prospect—*your prospect* with this great new Line *that covers every market.* And not only do you have "full coverage," but you also have *the leader* in each price field—merchandise that assures you full profit, *permanent profit* that stays in the bank and is not dissipated in keeping your owners satisfied.

Obviously, such a complete line of "step-up merchandise"—competitively priced—offers a greater opportunity for larger volume and increased profits. Now, even more so than ever, Kelvinator is the most desirable franchise in the industry.

a Kelvinator

—with Kelvinator Quality all the way through for only

$112.00 F.O.B. DETROIT

INSTALLATION AND TAX PAID

Think of being able to offer your prospects *a Kelvinator* for only $112.00—a Kelvinator that was *not* built *down to a price,* but one that has the well known quality, craftsmanship and value which has become traditional with Kelvinator in the past 18 years.

The new "R" Series has 3-Zone Cold; 8 freezing speeds; a new Kelvinator engineering development which permits refrigeration during defrosting; porcelain interior with rounded corners; one-piece steel exterior; porcelain cooling unit; the same compressor used in the higher-priced Kelvinators; and many other desirable features.

There are two models, the 4 and 6 cubic foot cabinets.

Here is a low-priced electric refrigerator that has a quality "look"—it has the ability to perform—it is dependable—and it is built for years of satisfactory service. It represents the greatest value in the low-priced field—a volume and profit opportunity without equal.

NEW DE LUXE LINE IS THE FINEST IN THE INDUSTRY

There are so many *outstanding* things about the new DeLuxe line. It is *fully automatic,* no dials to set, an exclusive Kelvinator feature. It has 4-Zones of Cold; the Frost Chest; the Kold-Keeper; World's Fastest Freezing Speed; and a long list of other design and engineering features.

The DeLuxe line includes five models, the 5½, the 6½, 7½, 9 and 12 cubic feet food storage capacity. In addition there are two special jobs, the 15 and 23 cubic feet.

"K" Line Represents Greatest Value in Medium-Priced Field

For the medium-priced market, Kelvinator offers two lines, the "K" and the "PK." The "K" series of four models, 4, 5, 6 and 8 cubic feet, is finished in Kelvinator "permanent white" lacquer on the exterior with porcelain interior. The "PK" series is all-porcelain and includes five models, 4, 5, 6, 7 and 8 cubic feet food storage capacity.

With one or two exceptions, these two lines have the same exclusive features which make the DeLuxe line the *finest* in electric refrigeration. Fully automatic operation; 4-Zones of Cold — on the "PK" and 3 on the "K," and World's Fastest Freezing Speed are features of these medium-priced Kelvinators that cannot be had on other higher-priced, competitive makes.

The long list of features which makes these models *so outstanding,* includes everything necessary for complete, satisfactory, long-lived refrigeration service. In every respect, they are the finest in the medium-priced field. As such, they are big profit producers for Kelvinator dealers.

Complete details of the new Kelvinator Line will be sent to responsible merchants who want a complete, dependable, *profitable* franchise for 1933. Write us direct to-day.

KELVINATOR CORPORATION • 14245 PLYMOUTH ROAD, DETROIT, MICHIGAN

Kelvinator of Canada, Ltd., London, Ontario • Kelvinator Limited, London, England

(600)

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Patent Control

COLONEL FRANK E. SMITH, president of Servel, Inc., once averred that the United States patent situation is in a mess which probably won't be straightened out for two decades.

There are some indications, however, that the refrigeration industry is modestly and quietly setting about to clean up its own portion of the "mess."

It may take considerable time; and, of course, the project may fail. But chief executives of the industry have definitely come to the conclusion that the time has come for a fight-to-the-finish to protect the integrity of their patent rights.

With the validity of a number of basic patents firmly established, a useful weapon will be available for bringing the present wild-eyed and chaotic conditions in the industry more firmly under control, and for effecting a reasonable stabilization of the electric refrigeration business.

Most recent and most important step toward patent control in the electric refrigeration industry came Sept. 19 when, in the United States District Court at Des Moines, Iowa, Judge Charles A. Dewey ruled valid Frigidaire's patent claims on the use of a "cold control" (temperature regulator) with an electric refrigerator.

Frigidaire Corp. and Penn Electric Switch Co. (which was licensed in 1930 by Frigidaire to use the two patents in question) filed suit in this district court Oct. 30, 1931, complaining that Majestic refrigerators infringed upon the use of a temperature regulator with an electric refrigerator as covered by the Blackmore patent 1,658,323 (filed June 15, 1922, issued Feb. 7, 1928), and the Summers patent 1,819,979 (filed May 30, 1928, issued Aug. 18, 1931).

Main issue in the trial concerned the status, as an invention, of an auxiliary means of varying the pressure on a thermostatic bellows. Judge Dewey, in a memorandum opinion, ruled that neither patent was invalid on the ground of conflict with previous inventions, as claimed by attorneys for the defendant (Jesse Moore, Des Moines Majestic dealer).

Frigidaire is now said to be preparing to file individual damage suits against each refrigerator manufactured using a control device which might infringe upon those patents.

What Frigidaire probably seeks is not to obtain sole use of a temperature regulator, but the right to say who shall be allowed to make them, and what they can charge for them.

Suit has also been filed against Domestic Industries, Inc., by Kelvinator, alleging infringement and contributory infringement on two Kelvinator patents on shaft seals for electric refrigeration compressors.

This suit was filed in United States District Court, northern Ohio district, eastern division, in equity No. 4259, and is based on patent No. 1,329,348, issued to Edmund J. Copeland Jan. 27, 1920, and patent No. 1,499,740 issued to Frederick H. Kolbe July 1, 1924—both of which are now owned by Kelvinator Corp.

Domestic Industries (manufacturer of Buckeye refrigerators) has recently filed an answer to this allegation, claiming prior use of this principle. A decision probably will not be handed down for some time.

It should also be noted that the "cold control" decision was rendered by a district court, and is subject to possible revision by a higher court.

Whatever the eventual outcome of the attempts (the above mentioned cases are just two examples) of pioneer manufacturers to establish a measure of patent control over the industry, these manufacturers have apparently decided to "give it a whirl." The stake is well worth winning.

Many years ago when Frigidaire, Kelvinator, Servel, and a few others had the field all to themselves, J. Robert Crouse, president of Nizer (later taken over by Kelvinator) and "father of cooperation in the electrical industry," attempted to get the leaders together on some sort of a program which might protect their field from invasion by hordes of manufacturers in the future. At that time six companies were included in the negotiations of the proposed patent "pool," but to those who held most of the high cards, even that small number looked like too many among which to divide the "pot." Today's situation seems to bear out the presumption that "J. Robert" probably had the right idea.

Up until this year the fast-moving electric refrigeration industry has been too busy developing its specialty sales tactics and keeping up with orders to think much about consolidating its position and intrenching. This year the need seems to have developed definitely. And it would appear that old line companies are now determined to make a drive for patent control.

Gleanings from Other Periodicals

IS THE PUBLIC CREDULOUS?

IN THESE days, only death is accepted without doubts. The simple faith in formulae and institutions on which business rests in good times is gone. The only response to an oracle is "Oh, yeah?"

In the new era of the late lamented 'twenties, if even the tritest sales scheme failed to work, the operator was astonished. As a matter of fact, it usually did work. For people bought about anything they were urged to buy. Money was simply a medium of exchange—and was exchanged as rapidly as possible.

One result of this state of affairs was that many concerns plunged into advertising with the enthusiasm, and about the same grasp of the subject, with which amateurs bought securities in 1929. A great deal was discovered about advertising that wasn't so. Anything that was tried seemed to get quick results, and was therefore accepted as sound advertising practice. In fact, one school of thought demonstrated to its own satisfaction that advertising results could be secured without doing any advertising at all. The general plan was to show proofs of important-looking advertisements to the trade, and after dealers were stocked up, decide not to run the advertising. Even that racket worked for a while. It was called "Bulling the trade."

Everyone wanted to get results right off the bat. The older system of building good-will and confidence was sidetracked, and the public was high-pressured from the start. If a national market wasn't captured in six months, the sales manager was thrown out on his ear and a new advertising agency was hired. If one million dollars' worth of advertising failed to do the trick, two million was tossed on the table. If a competitor tried to stay in the game, the stake was raised to three million—and so on.

A belief had been gathering force that honesty in advertising was desirable, but such mawkishness ceased to have much weight with many advertisers, and frauds that would have made an old-time patent-medicine man blush with shame were resorted to with cynical arrogance—and huge profits. A fixed scale of prices for dishonest testimonial letters was established. A woman enjoying the right balance between notoriety and social position received top prices. Those who were merely notorious took less—but were aided professionally by the publicity.

These various practices were merely expressions of a sort of general hysteria which gripped business for several years. Advertisers were not consciously crooked or crazy—they were simply swept along on a temporary flood, and were too excited to care where they were going.

Yet the true principle of advertising is as sound as ever. Its potency is as great. Its results are just as certain of attainment.

When a woman is going to buy something, two forces are quarreling in her mind—desire, and fear of being gypped. The sale is rarely consummated until desire has been made irresistible and fear has been driven away by confidence.

It is relatively easy to make people want things—in fact, latent desire for about everything exists in every normal mind. All that is needed is to make the reader conscious of a desire, and keep it active.

It is not putting it too strongly to say that until advertising has won the confidence of the public, it has accomplished nothing of permanent value.

It isn't necessary to become lost in a lot of psychological vagaries in a study of how confidence is established. You have confidence in certain people because you have known them for a long time and they have never lied to you or cheated you. You have no confidence in anyone you know to be a liar. That's really about all there is to it—long acquaintance and square dealing.

Most people feel instinctively that high-pressure selling is crooked selling. They may fall, but they do not believe. They know that they are being tempted, not convinced. Those who yield to temptation react with a deep and abiding hatred for the tempter.

When a man advocates honesty in advertising, it is not an effort to impose on business a sterile, ethical idealism, but is the expression of a belief that dishonest advertising is a slow poison that is lethal, and that honest advertising will inevitably create for a business the priceless asset of public confidence.—*The Wedge* of Batten, Barton, Durstine & Osborn, Inc.

Department Store Thinking

Note: The editorial, "Department Stores Rise," which appeared in the Sept. 7 issue of Electric Refrigeration News was reprinted in October Home Furnishing Review as a lead article. Accompanying this reprint was the following commentary by the merchandising consultant of that paper.

By Calvin Scofield

The editorial on the opposite page is reproduced from the ELECTRIC REFRIGERATION NEWS because we believe it to be the clearest expression on the subject of department store electric refrigeration merchandising which has yet appeared in any trade paper of the refrigeration industry. It is, of course, written from the standpoint of the manufacturer and there is certainly nothing in it with which the department store can take issue and there is much of encouragement both to the department store and the manufacturer.

In the November issue, we will treat at length the question of cooperation between department stores and utilities in appliance merchandising. We are confident that a solution of these differences of opinion will be universally worked out in the very near future. We have directed particular attention to the estimate of the present situation as given on the opposite page, because it points definitely to future opportunity for the department store in electric refrigeration selling.

As a matter of fact, the 1931 figures cited as the department store percentage of the total electric refrigeration business would probably need revision in the light of 1932's experience. Best opinions seem to agree that the 1932 department store percentage will range somewhere between 15 and 20 per cent of the total.

This editorial is a clear exposition of the situation as it has developed up to the present time. Our principal interest in the department store field is in the matter of progress from this point forward. If it is true that refrigeration is entering the boom distributing stage, that is so because the industry has developed wide consumer acceptance for the product. The time is therefore ripe for the department store to become a real factor in the industry.

Much of the contention which has existed between department store and manufacturer and which is pointed out on the opposite pages, has been due to the fact that the distribution policies of the electric refrigeration industry have been largely influenced by the automotive industry. Electric refrigeration sales executives have thought entirely in terms of the distributor-dealer type of selling. Obviously, policies so developed require considerable revamping before they are suitable for department store selling.

The tendency in that type of distribution is to develop overhead and selling expenses to a point which prohibits adequate discounts for the department store. In spite of these wide differences in selling experience and thinking habits many manufacturers and department stores have already made great strides in finding a mutual basis for profitable operation. I do not believe that department stores are entirely to be blamed for tearing down the price structure of the industry, but I believe it must take its proper share of responsibility.

At the risk of repetition, I believe that the department store must develop a consciousness of electric refrigeration as a product entirely different from the ordinary dry goods item. Refrigerators cannot as yet be sold by over the counter methods alone. Those methods which have proved most successful in specialty selling must be adopted by the department store and combined with their own commodity merchandising practices. The question of quality is of more importance than price, because you are selling something your customer expects to perform efficiently for a period of years. Many mistakes have been made by department stores in unloading poorly made, anonymous electric refrigerators at a price. The ultimate result has been heavy replacement and service expense or loss of customer good will which no store can risk.

One of the advantages which the department store has to offer the electric refrigerator manufacturer is the consumer-contact which his product obtains in the department store.

Automobile men early in the game realized that every car sold was a visible advertisement for the manufacturer since it rolled around the streets to be seen by thousands of prospects. Electric refrigerators in a dealer's showroom will be seen by one prospect while a thousand cannot miss it if it is on display in the department store. The volume possibility in this market should enable manufacturers to reduce their selling costs and progressively give greater value for lower prices. It is not wise, however, either for the store or the manufacturer to force price reduction at the expense of quality.

One of the most important factors in the development of satisfactory major appliance volume in the department store is the concentration of efforts on selling rather than buying. Simplify your buying job by concentrating on one or two lines. Give your salesmen a chance, thereby, to know their product thoroughly. Give your refrigerator department a supervisor who knows how to sell refrigerators and to train others to do so. You have every resource available in the department store to build your share of this business to a staggering total. It behooves the merchant to forget ribbon counter methods in connection with major appliance merchandising. — *Home Furnishing Review*, October.

SAYS THE EDITOR of *House Furnishing Review:* In the editorial remarks of Mr. George Taubeneck, editor of ELECTRIC REFRIGERATION NEWS and Mr. Calvin Scofield, merchandising consultant of *Home Furnishing Review*, in this issue the reader is presented the clearest picture yet drawn of the Department Store's position in electrical merchandising. Please read both editorials carefully.

Letters from Readers

Piano Industry Experiences

Central Distributing Corp.
Norge Distributor
Jamaica, N. Y.
Oct. 17, 1932.

Editor:

After studying conditions in the refrigeration industry for the past year, during which I have been actively engaged in the retail field, operating Norge stores in Queens County, I feel an expression of my conception of the industry may not be amiss.

May I state that previous to my entry in the refrigeration industry I spent a quarter century in the piano business, and was active in the trades activities through my connection with both national conventions and local trade associations in the city of Chicago.

In my former industry, the piano business changed from what was once a dignified and profitable business to what we all know exists today.

While those not familiar with the angles of the piano business might attribute the major reason for the present state of affairs to the radio, still if those who made a study of the piano business will express themselves, you will be told that the real reason was due to the fact that the manufacturers omitted the importance of continually keeping the public sold on the uses and accomplishments that the piano affords, its value to the American home from the standpoint of education and culture, and instead used "bait" advertising of prices and terms, and in many cases "gyp methods" which finally got the buying public in a frame of mind that turned them completely away from the entire piano industry, having lost confidence through such sales tactics.

Now, it is pitiful to see several of the larger companies in electric refrigeration become panicy and start a downward trend of prices, which will mean in the long run that they themselves will be unable to make a profit, and dealers and salesmen will be faced with the same condition.

It is never too late to change, and it would be well if the advertising heads of the various reputable companies would confine their promotion activities to having each manufacturer and distributor stress the economy, convenience, and sanitary benefits which a good electric refrigerator will contribute to improving home life—in other words sell an idea and not a price.

The public doesn't believe "yours is the best" because of this, that or those. The other fellow says so too, so why spend good money on this type of printers' ink; get prospects into the stores and then let loose on your good qualities.

ROGER O'CONNOR

Directory Useful

Refrigeration Service Co.
806 Hollywood, San Antonio, Tex.
Oct. 17, 1932.

Editor:

I enjoy reading *every* page of ELECTRIC REFRIGERATION NEWS. It has been very helpful to me in selling and servicing. Your "Expansion Valve" is a better page than "How to Sell Electric Refrigeration." Your queries and answers are good and they cause me to use my copy of REFRIGERATION DIRECTORY and MARKET DATA BOOK. I think lots of this book and find many uses for it.

ALEX MCKENZIE

UTILITY MAN TALKS ON SELLING POLICIES

FRENCH LICK, Ind.—In their appliance merchandising activities, it should be the aim of utility companies to supply quality service at a fair price, assume leadership in sales of quality appliances at established retail prices, and adhere to ethical, constructive merchandising methods that will encourage activity of all legitimate retailers.

So contended R. J. Malcomson, sales promotion and lighting sales manager, Public Service Co. of Northern Illinois, Chicago, when he addressed the executive conference of National Electric Light Association's Great Lakes division held Oct. 6 and 7 here.

Speaking upon the subject, "Must We Change Our Sales Methods?" Mr. Malcomson suggested various means for increasing appliance sales, and said that the best prospects for load-building appliances are those who already own, or live in wired homes.

Deplores Low-Price Emphasis

Deploring the emphasis laid by some retail outlets today on low-priced merchandise, Mr. Malcomson said, "Utility merchandising should not be competing with the cut-rate appliance store, the peddler, or the drug store.

"It should not be necessary for utilities to sell down, pushing off inferior, lower-priced products on purchasers who might buy something better."

If it be true that women are chief buyers of appliances, utilities should feature products that are of interest to women, even though the featured appliances are not major load builders, the speaker said.

Of store display, Mr. Malcomson had this to say: "We must fight against the element of coldness in display. A cold environment has the wrong effect on producing sales.

Requisites of Showroom

"Open type tables, plainly marked prices, and sufficient merchandise to make an attractive display are the first requisites of a successful utility showroom. Mass display is still a requisite of successful merchandising.

"Every store should display sufficient appliances to supply the day's sales needs. A customer hesitates in buying appliances when only one is displayed. She feels that she is getting the store sample."

He asserted that slow-moving lines should be featured items of merchandise, and that these lines' depreciation in price is all the more reason for featuring them in the store display.

Stock Inventories

Mr. Malcomson also opined that inventories of stock on hand should be submitted to sales managers at frequent intervals, because, he said, collection of certain types of stock results eventually in slow-moving supplies that are a hindrance to the sales department's activities.

"Utilities should have regular weekly or monthly features in their sales rooms to attract customers. Special merchandise not sold by outside salesmen, or an appliance which can be sold at a special price, is ideal for this purpose," said the Chicago man.

"Window displays are a major item in increasing store sales," he continued. "A window is worth 45 per cent of a store's monthly rental. Windows should be so attractively designed and arranged that they will act as a magnet on passersby.

Window Displays

"Window displays should tie in with company advertising, store displays, current national advertising, and seasonal demands. One employe should devote his entire time to window and store displays, for the latter must be changed frequently to be successful."

The speaker then urged that utility companies use sufficient and proper illumination in their stores, and suggested several possible uses of lighting to enhance store attention-getting qualities.

In urging utility executives to give their salesmen adequate training, Mr. Malcomson was especially emphatic. He said, "Sales training is one of the greatest needs today in utility merchandising.

The expert salesman can do much to offset mistakes in the buying of merchandise. He can keep the customer satisfied and loyal, and he can increase profits. Inexperienced, untrained salesmen can wreck your stock, waste your time and supplies, give out misinformation, and offend and alienate your customers.

Intelligent Selling

Your sales are as good as your salespeople. A salesman must sell intelligently, know his merchandise and its complete application and use. He must be able to sell a customer what the latter *needs*—not what he *wants*."

Many stores, he said, could materially increase their sales merely by training their salesmen to ask customers to inspect other merchandise. He declared that this should be a definite part of each salesman's training—that it is not enough to *suggest* that salesmen ask the public to buy. "It must be written out for him, and the words put in his mouth," he said.

Mr. Malcomson believes that too much stress is laid upon the real or imaginary difference between competitive appliances. "Too often, the salesman's instruction begins and ends with an array of reasons why one device is better than another," he asserted.

"Such competition should be cut out. The public should be convinced that any appliance is better than none."

If a salesman is to be of any real value to his utility company, he must be paid as much or more than he can make with any other concern, the speaker contended, and suggested that salesmen be paid on a salary and commission basis.

He pointed out that where emphasis is placed on load-building appliances, it is difficult to justify a compensation plan which recognizes only the merchandise value of sales made.

Split Risk on Compensation

Of this problem, the speaker said, "When you hire a salesman on a commission basis, he takes the gamble. When you hire him on a salary basis, you take the gamble. The risk should be split.

"It should be remembered that a utility appliance salesman is an educator as well as a salesman, and it is up to the utility to compensate him for the work he does in educating people in the advantages of electric appliances."

Follow-ups on sales of major appliances are important, Mr. Malcomson stated. He suggested home service programs as one means of properly educating the owner in use of her appliance.

"Demonstrations held with a view of increasing the kwh. consumption of appliances already in the customer's hands are as important as the demonstration of new electrical appliances that have not gained public acceptance," he said.

Sales Promotion Activities

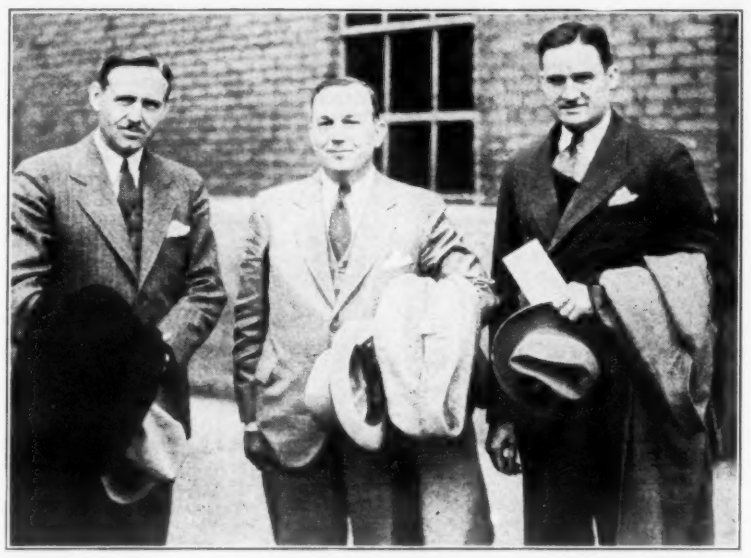
Of sales promotion activities by public utilities, Mr. Malcomson said, "In preparing for new business expenses in 1933, executives should be liberal in their budgets for such provisions as refrigeration shows, air-conditioning demonstrations, etc.

"These shows and demonstrations do as much as any other one thing to create an acceptance of the equipment being shown.

"Utilities must expect to bear a major portion of the expense in conducting demonstrations of this kind, and it is reasonable to assume that utilities, through the consumption of electrical energy by these appliances, profit more than any other branch of the industry."

His last statement was this: "National sales promotion plans have been worked out at considerable expense to manufacturers and industry associations. The utility that does not capitalize on this promotional work is missing an opportunity to build and increase sales."

Frigidaire Troupers



Sales Planning Director J. J. Nance, Sales Manager F. R. Pierce, and Vice President H. W. Newell of Frigidaire Corp. are presenting the fall sales program to field organizations.

RACKLIFFE DEALERS VIEW NEW KELVINATOR MODELS

NEW BRITAIN, Conn.—More than 75 Kelvinator dealers and their salesmen were present at a meeting at the Burritt hotel here, called by Rackliffe Bros. Co., Inc., Kelvinator distributor in this territory, to introduce the new Kelvinator line, according to Fred Rackliffe, vice president and secretary of the distributorship.

J. C. Burton, Kelvinator regional manager, presented the line, assisted by Si Kelsey, his assistant in this territory.

CUSTOMER PAYS $220 IN GOLD FOR WESTINGHOUSE

BOSTON—A prospect who paid $220 in $20 gold pieces for a Westinghouse refrigerator is reported by Jesse H. Lide, sales promotion manager of the Westinghouse office here.

"You may have believed that Mr. Hoover's anti-hoarding campaign would not meet with much success, but even a good old Democrat like myself could not help being amazed at an occurence which happened with our dealer, Sawyer's in Worcester, Mass," says Lide.

"The other day a woman came into the showroom, and asked to be shown the features of the Westinghouse dual-automatic refrigerator. After carefully listening to the sales talk and inquiring the price, she said that she would buy the refrigerator, and would return later that afternoon with the money.

"A few hours later she returned and brought with her $220 in $20 gold pieces. The oldest date on the coins was 1868, and that coin bore evidence of having been kept in the proverbial sugar bowl for lo, these many years."

Mutuals On Contest Started By G. E.

CLEVELAND—As an added incentive in the General Electric "Monitor Top Election Campaign," the 54 candidates for president of Refrigerania may participate in the Presidential Election Mutuals, in which the candidate having the largest number of votes for a given week is adjudged winner, according to P. B. Zimmerman, general manager, refrigeration division, General Electric Co.

The candidate with the second greatest number of votes for the week is given "place" position, and the one with the third greatest number wins "show" position.

Use 'Monitors' as Money

Mutual contributions may be made only with Refrigerania "monitors." A "monitor" is the unit of the monetary system of Refrigerania. "Monitors" are awarded to salesmen for selling specified amounts (dollar volume) of electric refrigerators. Each "monitor" is worth 10 cents in prizes, and may be cashed at the end of the campaign. These "monitors," in multiples of 10 each, may be used as votes in the mutuals.

Cleveland headquarters accepts the mutual contributions only through distributor campaign managers, or their representatives, who act as "bookies."

Monday Is Deadline

All mutual contributions must be received by Cleveland headquarters on or before Monday noon covering the votes earned by presidential candidates for the previous week. Contributions that are received late, or after the books are closed, are automatically held over and entered for the following week.

Winners are announced each week. Election mutuals order forms for placing contributions, and local mutual tickets for keeping a record of contributions placed by members of the organization, are supplied to all distributors.

BURNS' 3-RING CIRCUS INTRODUCES NEW LINE

PHILADELPHIA—In order that he might introduce the new line of General Electric appliances which he recently added to his business, Judson C. Burns, General Electric distributor here, held a three-ring circus at Philadelphia's fourth annual Electric and Radio Show.

Burns added to his line General Electric washing machines, flat-plate ironers, vacuum cleaners, Hotpoint ranges, Hotpoint electric water heaters, sun lamps, G. E. radios, and General Electric Junior refrigerators in addition to the Monitor Top refrigeration line.

At the show, he rented the largest space available, a floor area of 20x120 ft. A specially constructed tent, 20x75 ft., was spread over three sawdust rings, where continuous demonstrations were carried on by experienced demonstrators.

A flood of light from 500-watt General Electric reflectors poured down upon the demonstrating rings. In one ring there was a continuous cooking demonstration, while in the other two there was a refrigeration and a flat-plate ironer demonstration.

In a barker's booth beside the tent there was a musical clown who added color to the affair. Approximately 60,000 people attended the circus.

As an added attraction, several General Electric "house of magic" tricks were introduced, including a drinking fountain connected with photo-electric cells. When a person wanted a drink, he merely bent over the fountain and the water turned on. The water was controlled by the drinker's head passing through a beam of light which controlled the operation of the cooler.

Twenty-five salesmen were required to handle the crowds. The show was sponsored by the Electrical Association of Philadelphia. A feature of the association's program was "The Tompkin's Corners Real Folks," which act included a band.

A FACT THAT 10 YEARS IN THE REFRIGERATION INDUSTRY HAS TAUGHT US

. . . Present Gain

FUTURE LOSS

We know that every policy which we adopt is either helpful or injurious to our industry and therefore to ourselves. We know further that while we may apparently gain by some destructive procedure, that gain is only temporary. Therefore, as a matter of good business, we endeavor to make every policy for every department of our organization a constructive one.

UNIVERSAL COOLER CORPORATION

DETROIT, MICHIGAN — BRANTFORD, ONTARIO

MANUFACTURERS OF A COMPLETE LINE OF HOUSEHOLD AND COMMERCIAL REFRIGERATION EQUIPMENT

LITTLE STORIES OF INTERESTING PEOPLE IN THE REFRIGERATION INDUSTRY

THE EXPANSION VALVE

LITTLE STORIES OF INTERESTING IDEAS IN THE REFRIGERATION INDUSTRY

By George F. Taubeneck

Dairy Show

At the first of the year the word was being passed around among commercial refrigeration sales managers that there were but two good markets for commercial equipment this season: dairies and bakeries.

The prosperous dairy industry, it was claimed, enjoyed a greater margin between production costs and retail selling prices than it had had for the last 20 years.

After talking with some of the representatives of the dairy industry—particularly ice cream men—who thronged the seventh annual Dairy Industries Exposition at Detroit last week, commercial refrigeration men probably lost heart somewhat. Even the dairy industry is having its troubles.

As is the case with every other classification of business in the nation today, the chief howl is caused by price-cutting.

Ice cream for 15 cents a pint, double and triple-deck cones, giant sodas, and the like have been worrying ice cream men gray-headed this summer.

The exhibition, nevertheless, was a humdinger. Almost as big as the one at Atlantic City last year. Because of the low ceiling of Detroit's Convention Hall, the exhibition seemed like a market place in a labyrinth.

* * *

New Ideas

Low-temperature display cases for fancy-molded ice cream, and refrigerated trucks, again were centers of attention. But neither group was so strong in numbers as it was at Atlantic City in 1931.

Servel's CO_2-methyl chloride truck (carbon dioxide the condensing medium, methyl chloride the refrigerant) was one of the newest and most novel of the ideas presented.

Trading on the magic name of R. E. Olds, its new sponsor, the Kold-Hold Co. and its refrigerated trucks attracted a great deal of attention.

International Carbonic Engineering Co. had on display an ice cream display case, two types of household refrigerators (one with a dome top), and an air conditioner—all refrigerated with solid carbon dioxide.

The household refrigerators were made by Ranney; while the room cooler was a Marr Driceonator. Those jobs were highly interesting.

An automatic ice cream merchandiser, mechanically refrigerated (will take any standard ¼-hp. compressor), was exhibited by the Arthur H. DuGrenier Sales Corp. of Boston (factory in Haverhill, Mass.). The job on display had in it an Icemaster unit, which is also made in Haverhill. Its capacity is 175 ten-cent packages of ice cream.

In the Mitchell & Smith (corkboard insulation) booth was a miniature large-capacity milk-cooling room, designed, executed, and demonstrated by a smart young engineer whose name is Ketchum—highly appropriate, we thought, for an exhibit attendant.

* * *

Old Friends

"Auld Lang Syne" was the theme song of the exhibition. As the usually conservative and understating Jack Schaefer remarked: "*Everybody* was there."

Among the many old friends we bumped into were B. J. Vandoren, M. A. Spayd, L. R. Gault, and C. T. Mutchner of Frigidaire; Tony Wildman of International Nickel; Gale Pearce of Dry-Zero; F. M. Corliss and Harold Hulett of General Electric; Edward Fritz and W. L. Molloy of Grand Rapids Cabinet; W. H. Farnsworth and H. J. Burman of Kold-Hold; C. W. Nelson of the Nelson Mfg. Co.; C. A. Miller of Servel; Thomas Coyle of Roessler-Hasslacher; Paul Parker, A. E. Knapp, and Jud Sayre of Kelvinator.

* * *

Pre-Birdseye

Grand Rapids Cabinet's President Fritz reported that his sale of quick-frozen foods low-temperature display cases has been especially encouraging during the last few months.

Which reminds us of Tony Wildman's (International Nickel) recent discovery in a rare old leather-bound volume, "Annual Regifter, or a view of the Hiftory, Politics, and Literature, for the year 1778," printed in London for J. Dodsley in 1779.

A writer in the book makes the interesting observation that quick-freezing "does not dilacerate the parts" when he sees frozen eels come to life again after being thawed out slowly. It is said that Clarence Birdseye, the modern father of quick-freezing, got started working on his idea after seeing a similar sight.

Perhaps you'll be interested in this quotation from the "Regifter":

"Another advantage peculiar to the northern climates, is the preserving provisions by the frost. Frost may certainly be looked upon as the best pickle while it serves; that is, it alters the quality and taste of whatever is preserved by it less than any other. It is evident, the three common preserves, sugar, vinegar, and salt, impart their respective tastes so strongly, that very few things so preserved retain the least of their natural flavour.

"Whereas frost seems only to fix the parts and juices, and by that means to prevent fermentation. I shall mention a fact, in proof of this, which I had from my late worthy friend Mr. Swallowe, his Majesty's Consul General in Russia.

"He assured me that having, one winter, occasion to go from Petersbourg to Moscow, where eels are a great rarity, he ordered some to be taken before he set out on his journey to carry as a present; as soon as they were taken out of the water, they were thrown upon the ground to be frozen, they appeared quite dead and almost a piece of ice; they were then packed up in the usual manner with snow; and when he arrived at Moscow, which was in four days, the eels being thrown into cold water, and so thawed before they were dressed, discovered evident marks of life in them, and soon perfectly recovered.

"The inference I would draw from this fact is, that freezing does not dilacerate the parts. Veal frozen at Archangel and brought to Petersbourg is esteemed the finest they have; nor can it be distinguished at the table from what is fresh killed, being equally juicy.

"The markets in the capital are by this means supplied in winter with all manner of provisions, at a cheaper rate than would otherwise be possible; and it is not one of the least curious things to see the vast stacks of whole hogs, sheep, fish, and other animals, piled up in the markets for sale.

"Good housewives, as soon as the frost sets in for the winter, about the end of October, kill their poultry, and keep them in tubs packed up with a layer of snow between them, as one would put salt to pickle pork or beef, and then take them out for use as occasion requires: by this means they save the nourishment of the animal several months.

"I hinted that the method of thawing any thing must be by immerging it in cold water: that operation effected by heat seems to occasion a violent fermentation, and almost a sudden putrefaction: but when produced by cold water, the ice seems to be attracted out of the body, and forms a transparent incrustation round it.

"This I have constantly seen round grapes, when thawed, which looked as if set in glass. Nay, I have thawed a bottle of water, when frozen to a solid piece of ice, by this means without breaking the bottle, and the ice has formed an incrustation round it, in the manner I describe. The same thing may be observed if a cabbage which is thoroughly frozen be thawed by cold water; it is as fresh as if just gathered out of the garden; but if it be thawed by fire or hot water, it becomes so rancid and strong it cannot be eaten."

* * *

Quick-Frozen Foods

In case you'd like to be brought up to date on the quick-freezing business, here's about how it stands today:

Recession in activity with quick-frozen foods has been true of all packers save Birdseye (General Foods) in 1932. Indianapolis Abattoir Co. (Sally Lee Frigid Meats) went out of business. Swift, Armour, and other big Middle West packers have practically suspended quick-freezing operations.

More than 400 retail food stores in the East are now selling Birdseye Frosted Foods, however. All of these stores have been selling quick-frozen meats, fish, vegetables, and fruit on a profitable basis.

Next move of the Frosted Foods Sales Corp. (Birdseye) will be consolidation and intrenchment.

Instead of expanding into the South or Middle West, Birdseye field men will cultivate more intensively the dense area in which Frosted Foods are now sold, which includes New York, New Jersey, Pennsylvania, Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, Vermont, and Rhode Island.

Soon a separate sales division will be established to increase distribution through institutions, such as hotels, restaurants, and clubs. This trade requires special, large-sized packages. Armour and Swift have been selling to institutions for some time.

Production has run behind consumption during the last year on most of the quick-frozen items on the Birdseye lists.

Considerably increased production of such items as corn-on-the-cob and blueberries, which were sold out not long after being placed on the market last season, is planned for coming months.

Also on the production schedule are large packs of asparagus, broccoli, cauliflower, peaches, and new meat and fish items.

Although Tom Huston frozen peaches were marketed as early as 1929, this is the first time that Birdseye quick-frozen peaches have been available.

Huston, the peanut king, whose quick-freezing of Georgia peaches created such a stir in 1930, has practically passed out of the quick-freezing arena.

Borden's and National Dairy, which attempted to freeze and market orange juice last year, have also ceased firing. All quiet on the Southern front.

Under the direction of C. W. Souther, Birdseye is conducting a modest institutional and education campaign on quick-frozen foods on the Pacific Coast. Little or no attempt is being made to get distribution.

Atlantic Coast Fisheries, which has just reopened its quick-freezing plant at Gloucester, Mass., after several months' shut-down, continues to market its Nordic quick-frozen fish fillets in sizeable quantities, and other fish-freezing houses have continued to maintain their quick-freezing operations.

Fish seems the food best suited to quick-freezing.

A novel "fish-of-the-week" plan has been introduced by the Frank E. Davis Fish Co. of Gloucester, Mass.

To consumers who accept this plan comes a two- or four-pound package of quick-frozen fish each Thursday. The type of fish (hake, cod, mackerel, etc.) varies according to the shifts in the Gloucester market.

The fish are skinned and boned, quick-frozen at -50° F., and packed in one-pound wax-lined containers which in turn are packed in insulated containers—averaging about three fillets. Shipping is by prepaid parcel post.

A customer list of more than 200,000 families is said to be supplied by this company which merchandises quick-frozen fillets by mail.

Most observers seem to think that all the quick-frozen foods industry needs in order to come into its birthright is a strong national campaign to create consumer acceptance for quick-frozen foods, coupled with their merchandising by a large national chain of food stores.

Neither of these possibilities seems likely to happen in the ear future.

At present Birdseye is the sole p[illegible]neer of the industry. And because G[illegible]eral Foods believe in moving slowly a[illegible] assimilating well the small bites they take off the market, Birdseye promotio[illegible] has been limited thus far to the East.

Packers such as Swift and A[illegible]nour have been restrained from conduct[illegible]ng a national education campaign by f[illegible]r of retribution from meat retailers, who comprise the bulk of their custo[illegible]ers, and who are congenitally antago[illegible]istic to quick-frozen foods on the gr[illegible]nds that they transfer the function[illegible] of butcher from them to the packers.

Moreover, the large packers are l[illegible]athe to make additional capital expenditures during these times to develop a marke[illegible] for quick-frozen foods. Distribution for their fresh and smoked meats is already well established.

This situation is undoubtedly handicapping the growth of the industry. And although Birdseye seems likely to obtain a virtual monopoly on the field if the situation remains static, its officials would probably feel grateful for competitive activity, for quick-frozen foods need all the publicity and educational backing they can get.

Chain stores do not want to assume the burden of a big promotional campaign on quick-frozen foods alone; and are, in addition, faced with the problem of antagonistic tendencies toward quick-frozen foods found among the clerks in their own stores—whose sympathies are allied with the butchers who fear for their livelihood.

Moreover, chain stores generally sell items for which the market is already developed, and on which they can cut the quality slightly in order to get a lower price.

Because they like to sell their goods under their own private label, it seems entirely likely that when general acceptance for quick-frozen foods has been obtained, and when the demand has enabled the producers to get their prices down to the level of fresh foods, chain stores may be *licensed* to produce and sell quick-frozen foods. But that time seems relatively a long way off.

Today quick-frozen foods are being sold at prices somewhat higher than fresh foods. And during these days of depression, that fact is undoubtedly a powerful deterrent to the growth of the industry.

The avalanches of fresh fruit and vegetables which descended upon the market last summer put a heavy crimp in sales of quick-frozen fruits and vegetables this year.

Differential between fresh and quick-frozen meat and fish prices, however, was not so great.

According to all noticeable straws-in-the-wind, the quick-freezing industry seems destined for a very slow but steady growth.

* * *

Poet's Corner

A. R. MacMillan, assistant to John Knapp in charge of sales education at the Norge factory, dropped in recently to talk over a dealer manual he has been preparing. In this manual was the following pome, which we asked permission to run in our Poet's Corner:

A merchandiser he would be,
Although he knew not folks must see
Before they buy!

All features of the box he'd sell,
He or his men should clearly *tell*
Those who could buy!

But finally to prove it's real
Prospective customers must *feel*
What they may buy!

Publicity and salesmanship are only part appeal;
Home trials or demonstration must give that sense of feel.
When you've satisfied these senses,
With your prospects all the wiser
By converting them to customers,
Then you are a merchandiser!
And they will buy! !

* * *

Keyhole & Transom Department

In WHAT city is G. E. paying rent for an Electrolux display?

WHICH manufacturers of conventional type refrigerating units are working on hermetically sealed machines?

WHO was the distributor for one of the larger manufacturers, with an entire eastern state for his territory, that sold only 12 boxes during one month this spring?

WHERE was one prominent metropolitan distributor when an apartment house owner tried so hard to get hold of him to place an order for 182 units? Being unable to contact the distributor personally, the owner became angry and crossed a state line to buy them *sub rosa* from another distributor of the same machine.

Sh-h-h-h-h!!!

Mitzi Green, cast as "Orphan Annie" in the film of that name, and her playmates plan a raid on a General Electric.

How to Forget Your Troubles

Miss Claire Woods, a Shreveport, La., lass was entered as "Miss Frigidaire" in a local contest. She won, then became "Miss Shreveport."

News of Companion Electric Appliance Lines

BURNER GROUP FIGHTS OIL FIRM PREMIUMS

NEW YORK CITY—Concerted action has been taken by the directors of the American Oil Burner Association on behalf of their oil burner and fuel oil dealers in Washington, D. C., against certain practices of the Standard Oil Co. of New Jersey in connection with the offering of a premium to oil burner owners in exchange for long-term fuel contracts in this territory.

The campaign opened Oct. 5 with a series of newspaper advertisements warning the public "not to be deceived" by the proposals of "certain oil companies" who are seeking more fuel oil gallonage in Washington, D. C., Baltimore and Virginia.

Manufacturers Join Fight

Heading up the fight on behalf of the industry in the Washington territory, where Standard Oil of New Jersey is instituting its new sales policy, is the Oil Burning Council of Merchants and Manufacturers Association. Supporting the Washington dealers in their fight against a practice which, dealers claim, will force some of them out of business, along with independent fuel distributors are several manufacturers of oil burners.

Arthur W. Clark, managing secretary of the dealer division of the A.O.B.A., stated: "The American Oil Burner Association is much concerned over the effect that this free service offer may have toward misleading the public. Payment is generally made in some way sooner or later for any worthwhile service.

"The oil burner industry also frowns on the plan of any one service organization attempting to render satisfactory service on all makes of oil burners. The directors of the association call attention to the fact that their oil burner dealers actually sell automatic heat and are therefore much concerned in all of the things that the users of the burners have to deal with that have any direct bearing on satisfactory automatic heat," he continued.

Mr. Clark laid out a program to rally some 10,000 oil burner dealers in the United States and Canada to fight the "free service" practice in their respective territories.

Dealers Organized

The following oil burner dealers have organized themselves to oppose the Standard Oil Co. in its "free service" sales policy: Shull Service Corp. (McIlvaine); A.B.C. Oil Burner & Engineering Co. (ABC); L. P. Steuart and Bros. (Fluid, Century, and Hardinge); Silent Automatic Corp. (Timken and Silent Automatic); William Conradis Co. (Kleen-Heet); Domestic Service Corp. (Nu-Way); Automatic Heating Corp. (Petro-Nokol); Dome Oil Burner Co., Inc. (Toridheet); Columbia Specialty Co. (Quiet May); York Automatic Heating Co. (York).

'Hotpoint Special' Water Heaters Announced

NAPPANEE, Ind.—Mutschler Bros. Co. here has just announced a quick recovery, thermostatically controlled electric water heater in one- and three-gallon sizes which has been given the trade-name "Hotpoint Special."

The complete heater is manufactured by the Edison General Electric Appliance Co., Inc., Chicago.

The heating element is a Calrod high-speed unit of 1,000 watt in the one-gallon model, and 1,250-watt capacity in the three-gallon model.

The tank is equipped with a heat-regulating thermostat which automatically maintains the temperature of the water at a high heat. The current is turned on when the temperature of the water drops below a certain point and is turned off automatically when the water has been heated.

The one-gallon model will sell for $32.45 and the three-gallon model for $43.35. In localities west of the Kansas-Colorado line the price will be $2 higher on each model.

SEPTEMBER OIL-O-MATIC SALES SHOW 35.3% GAIN

BLOOMINGTON, Ill.—The Williams Oil-O-Matic Heating Corp. sold 35.3 per cent more oil burners in September, 1932, than were sold during September, 1931, according to C. U. Williams, president.

The Bloomington factory is now operating 23 hours a day, Mr. Williams states. He points to the increase in business and the enlarged payrolls as a sign of better business conditions.

Increase in Williams Oil-O-Matic sales has been due, the president believes, to reduction in price made possible by advancements in manufacturing and new production machinery; success of new and more aggressive merchandising plans this year; and a greater measure of public acceptance of the oil burner.

ONE MINUTE WASHER CO. OPERATES 3 DAILY SHIFTS

NEWTON, Iowa—A large increase of orders has necessitated a step-up of the production basis to three six-hour shifts per day in the plant of the One Minute Washer Co. here, according to C. Bassett, assistant sales manager.

One Minute washing machines are now being distributed on a national basis, Mr. Bassett states, with dealer coverage from coast to coast.

A new One Minute washer, model 75, has just been added to the line. It is equipped with porcelain tub, Westinghouse motor, and special transmission.

How To Sell Companion Lines

As Practiced By Campbell-Penfield, Inc., Detroit

By Phil B. Redeker

DETROIT—The successful specialty dealer in electrical appliances is one who can sell enough merchandise throughout the entire year at least to break even and keep a good sales force intact, who can maintain a reputation for honest dealing and good merchandise, and who can make himself recognized as an authority on electrical appliances in the particular community which he contacts.

So believes C. Campbell of Campbell-Penfield, Inc., who has maintained a successful dealer operation in Detroit for the past four years, and who before that time was wholesaler of electrical appliances.

Mr. Campbell's belief is based not only on his own experience as a retail operator, but also on his observations of many dealers who have passed into and out of the specialty game.

Diversified Merchandise Line

A diversified line of merchandise is a necessary factor if the dealer is to enjoy continued success, Campbell points out. The Campbell-Penfield Co., in addition to handling two makes of refrigerators, sells a well-known oil burner line, a line of washing machines, practically all the nationally-known makes of radios, vacuum cleaners, and ironers.

This dealer also handles "showcase" or "5 & 10" items as they are known to the dealer trade—musical instruments, radio tubes, small electric fans, etc.

A word-picture of the way in which the salesmen for Campbell-Penfield operate will illustrate the way in which companion merchandise broadens the salesman's activities and strengthens a dealer operation.

Eight retail salesmen are employed by the Campbell-Penfield Co. Most of them have been with the organization for some time. The majority of them are men who once owned and operated their own businesses.

Responsible Attitude

Campbell prefers men of this type because he believes that they will take a more responsible attitude towards their work, that they are adept at sizing up prospects, and know how to draw up contracts and close deals.

The salesmen each take a turn on the floor, which leaves seven men open for outside work every day.

These men spend their time canvassing prospects in the territory on which Campbell concentrates. They continually add supplemental information to a survey of the territory which shows the number and kind of electric appliances in every home contacted.

In connection with this survey, cards bearing the name of a user of Campbell-Penfield merchandise are tabbed with a red marker; prospects that have been previously contacted but not sold are designated by a yellow tab.

Exclusive Territories

Salesmen work exclusive territories. This is not only a most satisfactory arrangement from the standpoint of salesman contentment and efficiency, but it also serves to make the territory "acquainted" with the salesman, and the salesman soon finds it easy to gain an *entree* into the home.

"We train our salesman thoroughly in all of the products which we sell through sales meetings held each morning," Campbell says. "We believe that each salesman should be thoroughly conversant with our entire line, so that he will be able to answer any questions put to him by a customer about an electrical appliance.

"Oil burner selling takes a little more knowledge and training than does other types of electrical merchandise, as a survey must be made of the prospect's heating plant before the salesman can do any selling. A high-grade salesman can learn how to make such a survey with a little training and study, though.

"The *main task* of the salesman is to gain the *confidence* of the prospect, so that he can get inside to make such a survey. It is in this respect that previous contacts with users and prospects, and a speaking acquaintanceship with the people who reside in his territory come through to help the salesman.

"One of the greatest obstacles in the path of the retail dealer today is the public's fear of the small dealer in the specialty game. An excessive number of 'gyp' and 'high pressure' deals has made them wary of every salesman who contacts them, and many people are beginning to regard the well-established, reputable department store as the place to buy electrical appliances.

"It is up to the specialty dealer to gain the confidence of the public, to make for himself a reputation of fair dealing, of intelligent selling, of prompt service."

"Flexibility" in operation is one of the main requisites for success in a specialty merchandising operation today, says Campbell. The dealer must keep his operation flexible with regards to the emphasis which he puts on the sale of certain types of merchandise, and also with regards to his manner of selling.

Campbell's activities on radio are illustrative of this point. Most of the radios which he sells today are merchandised "over the counter" to people who come into the store. He keeps the models of three leading manufacturers on display; and he has prepared a complete portfolio giving descriptions and prices of all leading makes, so that he can sell the customer practically any particular make which the prospect might desire.

Financing by Dealers

If a dealer is big enough, he should do his own financing, Campbell believes. It adds a personal touch to the transaction, and acts to build confidence in the dealer.

In addition, the dealer and salesman become better acquainted with the customer, and as they have companion lines to sell, it gives them a better chance to sell the customer more merchandise. They can check up on the customer's payments, and when he has but one or two more left, they can contact him relative to another piece of merchandise.

"If a dealer does do his own financing, there is no better investment for his surplus than in his own finance organization."

Campbell has made his time-payment plan so simple that anyone in his employ can take a payment and make out a receipt without any loss of time or inconvenience.

This does away with the necessity of having an elaborate organization for the particular job of financing.

A dealer isn't very smart who can't make his service department show a steady profit, Campbell states. This again is a matter of gaining the confidence of users, of selling them on the idea of taking advantage of the dealer's service organization.

Among the necessary elements that go to make a service operation profitable is a competent service force, thoroughly schooled in the problems of all types of electrical appliance, and "selling that service" to the user through education and contact, according to Campbell.

The "showcase" merchandise is kept on hand not only because it rounds out the dealer's line of electrical appliances, but also because it returns an average monthly profit of $50 or better, which helps materially in paying for the cost of operating the store, Campbell says.

G. E. IS NEW MEMBER OF OIL BURNER GROUP

NEW YORK CITY—With its new oil furnace now having limited distribution, General Electric Co. has applied for and been accepted into membership of the American Oil Burner Association, following a meeting of the association's directorate in St. Louis, Mo., Oct. 11, according to Harry F. Tapp, executive secretary of the organization.

By meeting all the requirements of the association, the General Electric Co. automatically becomes a member of the Oil Heating Institute, and is entitled to display its emblem, states Tapp.

J. J. Donovan, manager of General Electric air-conditioning department, and recently elected a director of the American Oil Burner Association, says:

"With more than 40 years' experience in the design and manufacture of electrical control apparatus, it was quite natural that the General Electric Co., in 1927, should take up the study of such equipment with the idea of adapting it to automatic oil heating.

"Of the many phases of air conditioning, home heating was taken first because it was believed that popular interest and commercial possibilities were greater in this field. Keeping comfortably warm in cold weather—and the great centers of population are located in regions which have six months or more of winter—was considered paramount to other air conditioning requirements."

Commenting on the growth of the oil burner industry in the space of 12 years, Morgan J. Hammers, president of the American Oil Burner Association, says:

"More than three-quarters of a million burners are now installed in American homes, and the annual turnover in merchandising volume in oil and equipment is running upwards of $400,000,000.

"It is a conservative estimate to say that the next decade will see 20 per cent of American homes enjoying oil heating as compared with a present 4 per cent.

"It took the automobile industry 17 years to reach the same public acceptance as the oil burner received in 12. The first year that passenger cars were registered was 1895, and by the end of 1906 total registrations had risen to but 105,000.

"The first year that domestic oil burners were sold was 1919, and at the end of 1931 the total number in use was 773,400."

START CHRISTMAS DRIVE

ALLENTOWN, Pa.—The Pennsylvania Power & Light Co., G. E. distributor here, recently announced the opening of its fall and Christmas electric range campaign.

WOLVERINE

Seamless Copper Dehydrated Tubing

Quick, Perfect Flares —*Without Splitting*

On the job time is precious. That's where the integrity of Wolverine tubing counts most. Made only of 99.9/10% pure deoxidized copper—scientifically drawn to close specifications—A.S.T.M. B68-30T— annealed to absolute uniform temper—it has to give perfect results in flaring, swedging, bending. Dehydrated and sealed with the famous "W". Plain or tin-plated. Quick shipment. Coils of 25, 50 and 100 ft. lengths—larger on request.

WOLVERINE TUBE CO.

SEAMLESS COPPER BRASS & ALUMINUM

1491 Central Ave. Detroit, Mich.

Export Dept. H. M. Robins Co., Detroit

Sales offices in 26 cities. Eastern Sales Office—420 Lexington Ave., New York. Stock available at Los Angeles, 1015 East 16th St.

FEDDERS MANUFACTURING CO.

57 Tonawanda St. Buffalo, N. Y.

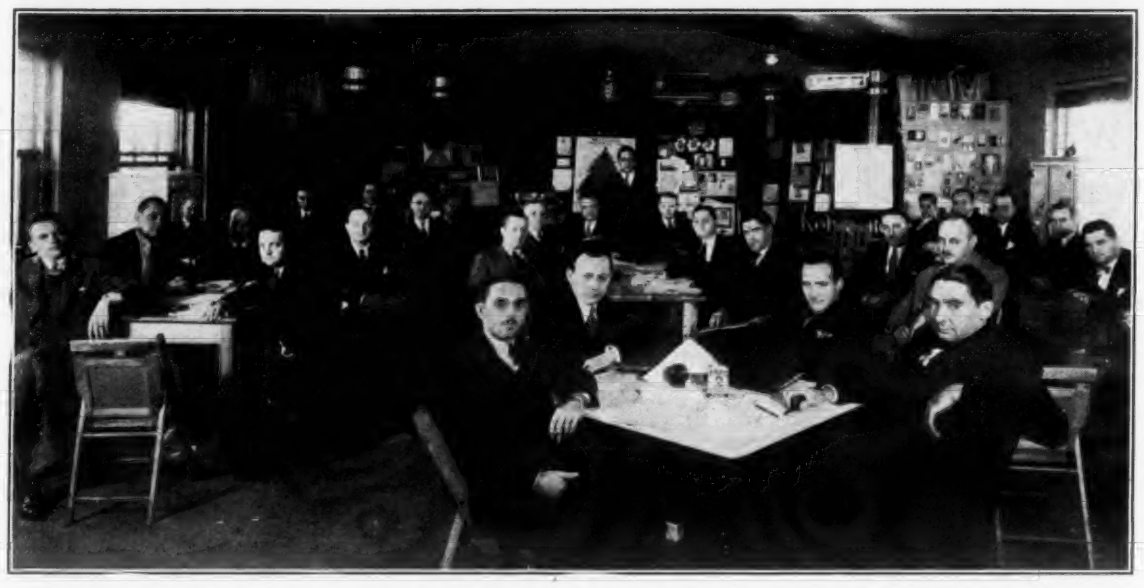
DISTRIBUTORS VIEW KELVINATOR MODELS

CHICAGO—A pre-showing of the 1933 Kelvinator line was held for 11 Middle West Kelvinator distributors at the Edgewater Beach hotel here recently.

The distributors attending the meeting were: Commonwealth Edison Co. and L. C. Wiswell Co., Chicago; Morley-Murphy Co., Green Bay and Milwaukee, Wis.; Wisconsin Valley Electric Co., Wausau, Wis.; Mueller Lumber Co., Davenport, Iowa; Mullen Plumbing & Heating Co., Dubuque, Iowa; Central Gas & Electric Co., Rockford, Ill.

Illinois Power & Light Co., H. M. Byllesby Co., and Federal Merchandising Co., Chicago; Central Illinois Public Service Co., Springfield, Ill.

Sayre's College for District Managers



J. S. Sayre (standing at rear of picture), Kelvinator sales manager, recently conducted a 5-day school for district managers. Various Kelvinator executives discussed sales problems with the "students."

How To Operate a Distributorship

As Told By Leslie B. Latham, Vice President of New York Leonard Distributorship

By Elston D. Herron

NEW YORK CITY—A Leonard factory executive remarked, recently, that E. B. Latham & Co., Leonard refrigerator distributor in metropolitan New York and northern New Jersey, sold five times as many refrigerators during the past fiscal year as during 1930-31.

So your reporter asked Leslie B. Latham, vice president, "How do you do it?"

His answer was this: "We have no wasted effort. Every person in our organization has one job to do, and one only. He doesn't have to divide his time and attention between types of work that are foreign to each other.

"In other words, we have completely departmentalized our refrigeration work. Each division specializes in one activity. It is responsible for all operations in its field.

Departments Apply Selves

"Every department applies itself, 100 per cent of the time, to one task—and consequently becomes mighty efficient in that line. And efficiency gets results."

The Latham company maintains a dealer contact department, another for apartment house sales, a service department, one for all sales promotion activities, and a credit department—all of which devote their attention to Leonard sales exclusively.

Although the organization also wholesales a number of other electrical appliances, their sale is conducted by departments entirely separate from those handling refrigeration distribution.

Seven Wholesale Salesmen

The company employs seven wholesale salesmen who contact, weekly, each of the 200 Leonard dealers supplied by the Latham organization.

Of their work, Mr. Latham said, "Their duties are not specifically outlined for them. They have simply been instructed to serve the dealers they visit in every possible way.

"If a dealer wants to place a large order, our salesman will take it. He will help close a sale. Or he will redecorate a window, and help rearrange the floor display. No job is too large or too small for him."

Not only is each Latham-Leonard dealer visited weekly, but he receives, every seven days, a bulletin or sales letter from his distributor. Mr. Latham pointed out that these letters are merely another means of keeping each dealer on his toes, in close touch with headquarters and his co-dealers—all of which is deemed all-important by the distributor.

Share Advertising Expense

Latham company shares one-half of all dealer newspaper advertising expense, and supplies dealers with direct-mail advertising materials at cost. The organization is "sold" on the value of advertising, and urges its dealers to advertise extensively.

"We recommend that our dealers exhibit Leonards at fairs, shows, and public exhibitions wherever possible," said the vice president. "And at such events as county fairs, we urge all dealers in that territory to hold cooperative displays."

The distributing organization itself does considerable newspaper, billboard, and direct-mail advertising, according to Mr. Latham, and uses space at all electrical shows, real estate meetings, and similar affairs held in New York City.

Names of prospects found at these exhibits are given the dealers in territories where the prospects' homes are located.

"One of our best advertising media is our fleet of trucks," said Mr. Latham. "We have a number of five-ton trucks, all painted snow-white, and carrying large Leonard posters on their sides. We call them our 'traveling billboards,' and we've found that they draw a lot of attention."

Cooking School Series

The company plans to start a series of cooking schools soon, as further aid to its dealers, according to the vice president, who is proud of the fact that not one of the company's 200 refrigerator dealers has dropped out of the organization of his own accord since the company began distribution of Leonard electrics two years ago.

E. B. Latham & Co. takes utmost care in securing new Leonard dealers, Mr. Latham asserted. Before a man is asked to become a dealer, the wholesaler investigates his financial status, then his store location and display room facilities. If these are satisfactory, the distributor presents its proposition.

Each established dealer is required to carry a stock of Leonard refrigerators which the distributor thinks is sufficiently large for complete display, demonstration, and sales purposes. Each dealership must have at least one trained service man.

Train Service Men

Dealer service men are trained for their work at what Mr. Latham calls "sectional service schools." Service men from dealerships located near the Latham wholesale headquarters are instructed by a service expert at schools held at the wholesale house.

Service men from dealerships in northern New Jersey gather at the Latham branch in Newark for their training. In other sections of the wholesaler's territory, service schools are held at dealerships so located as to be a convenient gathering place for men from neighboring dealerships.

At all schools, instruction is given by a service man from the wholesale organization. Twenty-five schools have been held during the past two years. They are sponsored by the distributor whenever it is felt that there is a need for them.

Stock of Leonard Parts

The wholesaler carries a complete stock of Leonard parts to insure quick repair service, according to Mr. Latham, and is equipped to render 24-hour service on all Leonard apartment house installations in its territory.

Eight Latham-Leonard apartment house salesmen are now concentrating their efforts on small apartment houses, and upon larger buildings wherein a replacement of old units is necessary.

"Owners of small apartment buildings have found that they must equip their apartments with electric refrigeration if they want to get renters. This has opened up a market of almost unbelievable size in New York," the vice president said.

Latham apartment house salesmen have found one of their best sales tools to be a portfolio of photographs showing a number of apartment buildings in the New York territory which have been equipped with Leonard refrigerators.

"In searching for new Leonard retail outlets, do you make a special effort to secure dealers in any certain line of merchandising?" Mr. Latham was asked.

His answer was, "Yes. We try to secure good automobile dealers as Leonard dealers, whenever possible, although we do have many strong retailers not in the automobile business.

"We believe automobile dealers are almost ideally qualified, because of the nature of their business, to sell electric refrigerators.

Auto Dealers Qualified

"They understand service problems; they have had experience with various finance plans; they are accustomed to making large unit sales; in many instance their businesses are well capitalized; they have good display space available; they are aware of the fact that they need a companion line to supplement their automobile sales," Mr. Latham pointed out.

And in addition, he said, automobile dealers already have a good list of refrigerator prospects—those persons who have bought cars from them in the past.

KELVINATOR DISTRICT MANAGERS CONVENE

DETROIT—A training school, planned to perfect the sales technique of the district managers, was held by the Kelvinator Co. for five days, recently, in the fourth floor auditorium of the factory.

The school was in charge of Sales Manager J. S. Sayre, instructor-in-chief. On the first two days, Sayre dominated the program. He was followed by W. H. Reinach, head of the national user division, M. Wylie, secretary of the company, and A. E. Knap, commercial sales department, who instructed the class on how to sell Kelvinator commercial refrigeration.

Alltmont on Water Coolers

On the third day, S. F. Alltmont told the story of water cooling sales. H. A. Seibert, service manager, and H. K. Lyons, order and distribution manager, next explained to the class the functions of their respective departments.

The fourth day was given to "Jack" Egan for instruction in credit and finance. He was followed by C. M. Armstrong who drove home the part ReDisCo will play in 1933, with its Dealers Floor Plan, and other terms to make refrigerator buying painless.

Department Store Sales

D. J. McIntyre, manager of the department store division, told about this new end of Kelvinator selling, and explained how the district managers could help its success.

The last two days were given to advertising and sales promotion. Vance G. Woodcox, advertising and sales promotion manager, took the floor, assisted by John Garceau, Fred Hulburd, and others of his department.

Garceau described the process of literature production, showing the pieces and explaining them. Woodcox explained the whole gamut of advertising signs, sales promotion helps, and the comprehensive program for Kelvinator in 1933.

Advertising Program

Time was allotted in this section of the school course to permit Brooke, Smith and French, advertising counsellor, to tell how an agency helps its client. Willard French and E. L. Triffit addressed the school. Mr. French explaining that 50 people in the agency work, one way or another, on the Kelvinator account.

Mr. Dobberteen of Brooke, Smith and French spoke on newspaper and magazine advertising plans for Kelvinator.

President Mason and Vice President Burritt arrived back in Detroit from their western tour before the school adjourned, and both addressed the class on the improved business conditions discovered on their trip west and southwest.

Examination Closes School

An examination was held at the conclusion of the school on the material presented by the different speakers.

A dinner was given the district managers the first night at the Lee Plaza hotel in Detroit, where the men had stayed during their sojourn.

At this dinner, a diamond ring was presented to "Jud" Sayre by the district managers as a remembrance of the school. He was also given a hand-lettered sheepskin scroll bearing the autographs of the donors.

VOLLRATH, MANUFACTURER OF METAL WARES, DIES

SHEBOYGAN, Wis.— C. A. W. Vollrath, president of the Vollrath Co. of this city, manufacturer of enameled steel and cast iron wares, died Oct. 7, at the age of 73 years.

He was born in Sheboygan, the son of Jacob J. Vollrath, pioneer of the enameled ware industry. When 15 years old he entered his father's plant as a furnace apprentice.

Upon the elder Vollrath's death in 1907, the son became president of the company.

Testing Service
for Domestic and Commercial Electric Refrigeration
Testing and experimental laboratory service for Manufacturer, Distributor, Central Station. Test data exclusive property of client.
ETL Know by Test
Electrical Testing Laboratories
80th St. & East End Ave. NEW YORK

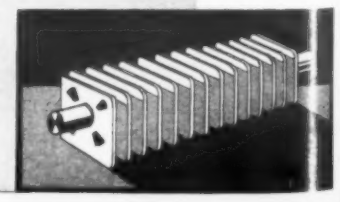
Testing Laboratory
For refrigerators and refrigerating equipment
George B. Bright Co.
Refrigerating Engineers and Architects
2615 12th St., Detroit, Mich.

The PUREST SULPHUR DIOXIDE Extra dry ESOTOO
Guaranteed
75 WEST ST. N.Y. 131 STATE ST. BOSTON
VIRGINIA SMELTING CO. WEST NORFOLK, VA

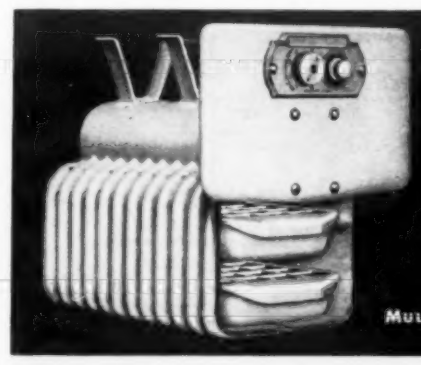
NAME PLATES ALL KINDS
Vitreous Enameled or All Metal
Let the name plate advertise your product. We will design one for you.
THE D. L. AULD CO.
COLUMBUS, OHIO

McCORD Domestic EVAPORATORS

Automatic defrosting between cycles of McCord fin tube type refrigeration cooling surface assures constant temperatures and minimum dehydration.
PRICES ON REQUEST
McCord Radiator & Mfg. Co.
DETROIT

BUSH
FINNED TUBING
INDIVIDUAL SQUARE FINS
With modern equipment for quantity production and 22 years experience in the manufacture of finned tubing, we are ready to meet the various requirements of the refrigeration industry for condensers or other fabricated forms of finned tubing . . . .
Send for 100N folder — it gives complete specifications.

THE BUSH MFG. CO.
HARTFORD, CONNECTICUT

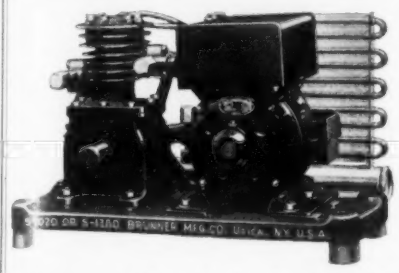
ANSUL SULPHUR DIOXIDE
The Ideal Refrigerant
made by the ANSUL CHEMICAL COMPANY
MARINETTE • WIS


The MULLINS SHEET METAL EVAPORATOR
Sanitary - Compact Efficient
White Porcelain Enamel
DESIGNED FOR USE WITH HIGH SIDE AND LOW SIDE FLOATS — IMPROVED FAST FREEZING SHELF AT SLIGHTLY INCREASED COST
Manufacturers: Write for Details!
MULLINS MANUFACTURING CORPORATION
REFRIGERATION DIVISION
SALEM, OHIO

BUYER'S GUIDE

Manufacturers Specializing in Service to the Refrigeration Industry

SPECIAL ADVERTISING RATE (this column only)—$12.00 per space. Payment is required monthly in advance to obtain this special low rate. Minimum Contract for this column—13 insertions in consecutive issues. All advertisements set in uniform style of type with standard border. Halftone engravings of 100-line screen, either outline or square finish. No reverse cuts or heavy black effects. No charge for composition.



Built With Confidence on a Sound Foundation

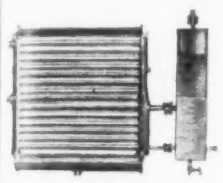
Brunner equipment measures up to superlative claims of performance, long life and freedom from excessive service.

BRUNNER

High Sides and Compressors

Brunner Manufacturing Co. *Refrigeration Division* **Utica, N. Y.**

Direct Expansion Dairy Aerators



For Ammonia or Methyl Chloride

These Direct Expansion Dairy Aerators have been designed to give dairymen milk cooling apparatus in its simplest, most dependable and most efficient form.

All sizes are available in this type.

H. C. PARKER, LTD.

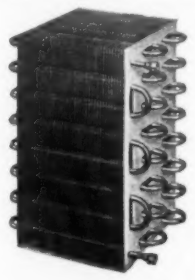
Factory and General Offices

2627 Santa Fe Avenue Los Angeles, California

BRANCH OFFICES

392 Clifton Ave., Newark, N. J.
510 Larkin St., San Francisco, Calif.
734 M. & M. Bldg., Houston, Texas
237 Roosevelt Bldg., St. Louis, Mo.
37 W. Van Buren St., Chicago, Illinois

A NEW FIN COIL *by* PEERLESS



Wedge-locked and edge-locked aluminum fins on tinned copper tubing for methyl chloride, sulphur dioxide, F-12, etc.,—aluminum tubing for ammonia.
Absolute Metal to Metal Contact.
A Superior Coil in which Soldered Return Bends have been eliminated.
Priced to meet 1932 conditions.
Write—Wire for Catalog.

PEERLESS ICE MACHINE CO., 515 W. 35th St., Chicago, Ill.

Completely assembled and individually bagged. Ready for shipment in your refrigerator. Write for complete list of standard sizes and prices.

Hoosier *Standardized* **Parts**

HOOSIER LAMP & STAMPING COMPANY, EVANSVILLE, IND.

We will make it for you!

We are perfectly equipped for quantity production of light or heavy mechanical parts or units. Precision manufacture and rapid delivery. Unusually moderate charges.

Indian Motocycle Co.

Springfield, Massachusetts

ALUMINUM ICE TRAYS AND GRIDS

Stock Sizes . . Deep and Shallow

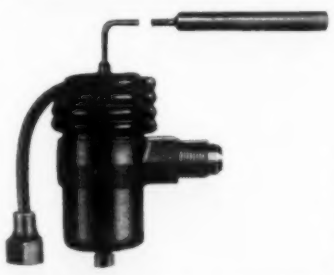
In New ANODIC Finish

Resist Discoloration
Retain Sheen Indefinitely

Can also make to your specifications special sizes of trays and grids, tray covers and shelves or any other special stampings.

Write us about your requirements

ALUMINUM GOODS MFG., CO. MANITOWOC, WIS.



The PEERLESS THERMAL EXPANSION VALVE

(Pat. No. 1870090, Others Pending)

For use with Methyl Chloride and Sulphur Dioxide

The perfect thermostatic valve. The control always resides in the bulb due to the patented Peerless warming method. The PEERLESS will eliminate your expansion valve troubles.

List Price, $13.50. Write for bulletin.

PEERLESS ICE MACHINE CO., 515 W. 35th St., Chicago, Ill.

REQUESTS FOR INFORMATION

Please refer to the 1932 Refrigeration Directory and Market Data Book for a complete list of all manufacturers of refrigeration equipment, parts, materials, supplies, and accessories; also for all available statistical data on sales of refrigeration equipment, distribution methods, etc.

To obtain a copy of this book send $2.00 to Business News Pub. Co., 550 Maccabees Bldg., Detroit, Mich.

Advertisers will be given preference in published answers to requests for buyer's guide service, but a complete list of all known suppliers will be mailed if stamped, self-addressed envelope is enclosed with inquiry.

Readers who can be of assistance in furnishing correct answers to inquiries, or who can supply additional information, are invited to address Electric Refrigeration News, mentioning query number.

Chicago Electric Appliance Mfg. Co.

Query No. 966—"Kindly publish, or forward by return mail, the address of the Chicago Electric Appliance Mfg. Co."

Independent Service Companies

Query No. 967 (Distributor, New York)—"Will you kindly send us your new listing of independent service companies located within a radius of 10 to 15 miles of Asbury Park, N. J."

Export Figures

Query No. 968—"Page 12 of your Sept. 28 issue shows exports of refrigerators, and we are wondering whether or not the heading 'Parts for Electric Refrigerators' includes compressor units complete that are shipped for export without cabinets."

Answer—No, the Bureau of Foreign and Domestic Commerce instructs exporters to place compressor units under the classification "Electric Household Refrigerators" or "Electric Commercial Refrigerators up to 1 ton," regardless of whether or not the cabinet is shipped at the same time.

Expansion Valves

Query No. 969 (Dealer, Indiana)—"I have a customer who bought a Polaris electric refrigerator, made in Logansport, Ind., some years ago. The expansion valve has gone bad.

"Do you know of any company that manufactures an expansion valve that can be installed *at the compressor*, or close to it since there is no room in the cabinet itself for it. This would be at least 24 in. under the coil."

Answer—Although it is not recommended practice, almost any automatic expansion valve will operate if installed at the compressor. The difficulty in installing it there is the fact that the suction line will frost up between the valve and the evaporator. This condition can be somewhat alleviated by insulating the suction line. Manufacturers of expansion valves are listed on page 378 of the 1932 REFRIGERATION DIRECTORY and MARKET DATA BOOK.

Ice Association

Query No. 970—"Kindly advise by return mail where the National Ice Manufacturers Association is located, and what its proper name is if this is incorrect."

Answer—National Association of Ice Industries, 228 N. LaSalle St., Chicago.

Addresses Wanted

Query No. 971 (Manufacturer, Ohio)—"Please advise where the office and factory of each of the following concerns are located: Rich Refrigerator Co., Cold Storage Refrigeration Co., and the Garland Refrigerator Co."

Answer—No record of the Rich Refrigerator Co. A previous Directory lists the Cold Storage Refrigerator Co. in Eau Claire, Wis., and the Garland Refrigerator Co. at 101 Park Ave., New York City.

Courses in Air Conditioning

Query No. 972 (Distributor, Tennessee)—"Can you suggest a correspondence course in air conditioning and room cooling. We would like to have the names of several, so we can pick the one which is best suited to our requirements."

Refrigerator Sales Statistic

Query No. 973—"Some time ago you published a chart showing the progress of sales of electric refrigerators—household models, commercial models, and the two combined. We are keenly interested in this type of information, and would appreciate being sent the figures by which this same chart may be brought up to date from the beginning of 1931."

Answer—All available statistics regarding electric refrigerator sales up to the end of 1931 are published in the 1932 REFRIGERATION DIRECTORY and MARKET DATA BOOK. A forthcoming revision of the Directory, to appear in about two weeks, will bring this data up to date.

Compressor Manufacturers

Query No. 974 (Refrigerator manufacturer, Wisconsin)—"Will you be kind enough to give us a complete list of refrigeration compressor manufacturers?"

Answer—Brunner Mfg. Co., Utica, N. Y.; H. C. Parker, Ltd., 2627 Santa Fe Ave., Los Angeles; Indian Motocycle Co., Springfield, Mass.; Peerless Ice Machine Co., 515 W. 35th St., Chicago; Universal Cooler Corp., 7424 Melville Ave., Detroit; and Kulair Corp., Philadelphia.

Holmes Replacement Parts

Query No. 975 (Manufacturer, Connecticut)—"Please advise us where we can obtain replacement parts for the Holmes electric refrigerator, which is no longer being manufactured."

Answer—American Hardware Stores, Fairfield Ave., Bridgeport, Conn., or from J. H. Lerner, 184 State St., New Haven, Conn.

Grunow Activities

Query No. 976—"We understand that W. C. Grunow, formerly of Grigsby-Grunow Co., has gone into the manufacture of refrigerators in Chicago. Kindly advise us if this is true, and give us his address."

Answer—As reported in the Aug. 24 and Oct. 19 issues of ELECTRIC REFRIGERATION NEWS, W. C. Grunow has organized a new company known as the Grunow Corp., and is preparing a factory at 4127 George St., Chicago, for the manufacture of electric refrigerators.

KELVINATOR BRINGS OUT 1933 MODELS

(Concluded from Page 1, Column 5)

ice cube trays, and a low-temperature tray for fast-freezing of ice cubes, without a manual temperature control.

The control panel, mounted on the evaporator baffle, has a push button to start and stop the machine, and automatic overload protection effected by an internal mechanism which can be reset manually with the button. Defrosting is done on the control panel by moving the toggle switch to the defrosting position—operating the machine on a defrosting cycle without raising cabinet temperatures.

The PK line has the features of the K line, in addition to porcelain exteriors, interior electric lights, and a low-temperature double-depth tray for storing ice cubes, meats, frozen foods, etc. The 5 and 6 cu. ft. models also have greater ice cube capacity than 5 and 6 cu. ft. models in the K line.

Five D models comprise the du luxe line. They have all features of the PK line, and in addition French gray door trim, a "Frost Chest," and a brine tank (known as the "Kold Keeper") to produce a refrigeration hold-over effect. The "Frost Chest" is for low-temperature storage purposes or to freeze blocks of ice from 5½ to 9¼ lbs. in weight, depending on the model. Two models, 15 and 23 cu. ft., are offered on special order.

All models have Panelite door trim, rubber shelf supports, and porcelain cooling units. K, PK, and D models have a sliding egg rack, chromium tray fronts, anodically treated ice cube trays, rubber trays, and die-cast chromium-plated hardware.

WATER COOLER INSTALLED

NASHUA, N. H.—The Nashua district of the Public Service Co. of New Hampshire recently installed a CW-85 Kelvinator water cooler in the United States Post Office here.

This order was received from the government after bids from all other manufacturers had been considered.

THE CONDENSER

PAYMENT IN ADVANCE is required for advertising in this column. The following rates apply:

POSITIONS WANTED—Fifty words or less, one insertion $2.00, additional words four cents each. Three insertions $5.00, additional words ten cents each. ALL OTHER CLASSIFICATIONS—Fifty words or less, one insertion $3.00, additional words six cents each. Three insertions $8.00, additional words sixteen cents each.

REPLIES to advertisements with box numbers should be addressed to the box number in care of Electric Refrigeration News, 550 Maccabees Building, Detroit, Mich.

POSITIONS AVAILABLE

CAPABLE DRAUGHTSMAN with layout experience in electric refrigeration with ability to assume important responsibilities. Engineering experience preferred. State qualifications fully in first letter listing positions held in last five years. This opening exists in city approximately 100 miles from Detroit. All applicants meeting qualifications will be interviewed. Address Box 516.

POSITIONS WANTED

REFRIGERATION EXPERT. Qualified by experience to act in chief or consulting engineering capacity offers his services to manufacturer now in production or considering to enter the industry. Licensed consulting engineer in State of New York. Box 514.

REFRIGERATION MAN. Well versed in compressor and coils, (either system), wishes to make connection with reliable company. Also has several ideas which will beat what's on the market in this line. Box 515.

FOREIGN SALES REPRESENTATIVE: American, speaks Spanish, Italian, Portuguese, French, German. Successful experience throughout Latin America and Europe, appointing distributors, organizing their sales outfits and service departments, wishes similar position on a salary and commission basis with refrigeration manufacturers. References from present and past employers. Box 517.

555, INC., TO INSTALL UNITS IN VETERAN'S HOSPITAL

LITTLE ROCK, Ark.—P. D. Sowell, wholesale manager of 555, Inc., Kelvinator distributor of this city, recently secured a contract for the sale and installation of Kelvinator refrigeration equipment in the new U. S. Veterans' Hospital, No. 78, Fort Roots, Ark.

Equipment installed consisted of: No. 900-I Temprite cooler, with WR-56 unit; two No. 119 type H Halsey Taylor coolers with WF-47 units; one No. 126 type L Halsey Taylor cooler with S-15 unit.

BARGAIN

Stock of Larkin Coils

Our entire stock of brand new, unpacked, Larkin Coils for commercial display cases and storage boxes will be sold to the highest bidder. Company has retired from refrigeration business and is liquidating its inventory.

Stock can be seen at any time and is all guaranteed.

Write for details

Address Box 509
Electric Refrigeration News

COMBINATION SUBSCRIPTION RATES

How to save money on your subscription order

NO.	PUBLICATIONS	YOU PAY	YOU SAVE
1	Electric Refrigeration News (1 Year) and Refrigeration Directory and Market Data Book	$4.00	$1.00
2	Electric Refrigeration News (2 Years) and Refrigeration Directory and Market Data Book	$6.00	$2.00
3	Refrigerated Food News (1 Year) and Refrigeration Directory and Market Data Book	$2.00	$1.00
4	Refrigerated Food News (1 Year) and Electric Refrigeration News (1 Year)	$3.50	$ .50
5	Refrigeration Directory and Market Data Book and Electric Refrigeration News (1 Year) and Refrigerated Food News (1 Year)	$4.50	$1.50
6	Refrigeration Directory and Market Data Book and Electric Refrigeration News (17 Weeks)	$2.00	$1.00

Order by number. Use coupon below. These rates for U. S. only.

Group Order Rates for U. S. and Foreign Countries

PUBLICATIONS	NUMBER	UNITED STATES*	CANADA†	ALL OTHER COUNTRIES
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